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Second Annual Report  
of the  
U.S. FEDERAL  
POWER COMMISSION

Fiscal Year Ended June 30, 1922



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1922

**FEDERAL POWER COMMISSION.**

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**THE SECRETARY OF WAR, *Chairman,***

**THE SECRETARY OF THE INTERIOR, THE SECRETARY OF AGRICULTURE.**

**O. C. MERRILL, *Executive Secretary.***



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# SECOND ANNUAL REPORT OF THE FEDERAL POWER COMMISSION.

## PART I.

### 1. INTRODUCTION.

A review of the work of the Federal Power Commission during the two years of its operation clearly indicates the practical value of the Federal water power act and the task now confronting the commission. Due to the many years' delay in securing adequate Federal legislation it was but natural that a flood of applications should have followed immediately upon approval of the act. Nevertheless, during its second year there have been filed with the commission applications aggregating a net total of 5,000,000 horsepower of proposed installation. This amount, added to the applications of the preceding fiscal year, makes a grand total of 321, involving in excess of 20,000,000 horsepower.<sup>1</sup> This amount is more than twice the existing water power installation of the United States, and more than six times the aggregate of all applications for power sites under Federal control in the preceding 20 years.

Nearly one-half of the aggregate of 20,000,000 horsepower is represented by applications upon the St. Lawrence, Columbia, and Colorado Rivers, upon which, in general, action has been suspended. The St. Lawrence involves international relations and may require a treaty before action can be taken. The Columbia has been under investigation by a special board to determine, before applications are approved, the relation between water power, irrigation, and navigation upon that stream. Action on the Colorado River is awaiting the findings of the Colorado River Commission, an organization authorized by act of Congress for the purpose of negotiating between the States within the Colorado basin a compact in accordance with which the waters of the river may be apportioned among these States.

By confining its activities primarily to applications for power projects, declarations of intention, and requests for restoration to entry the commission has been able to take final action on more than

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<sup>1</sup> As this report is sent to press, the grand total of applications received is 357, involving in excess of 21,100,000 horsepower.

half of the applications filed during the two years. While there have been delays in arriving at decisions, the majority of these delays are chargeable to the infeasibility of the projects for which applications have been made, to the lack of financial ability or experience of applicants, or to conflicts in interests which in many cases have been serious and have required long and careful investigation and study before decision could be rendered. The development of hydroelectric power involves large outlays of capital, and the successful development of water power requires a high degree of training and ability in handling its financial and technical problems. Of this, many applicants seem not to be aware. The result has been to put a considerable burden of investigation upon the commission in order that it might not grant rights where there is little probability that the projects can be financed and constructed. When projects have been economically feasible and financial ability has been shown the commission has acted with promptitude.

Up to June 30, 1922, the commission had authorized 58 preliminary permits and 49 licenses, of which 18 were for transmission lines. The 58 permits now outstanding involve an estimated installation of 2,405,975 horsepower and the 31 licenses for power projects 1,945,245 horsepower, or a total of 4,351,220 horsepower. Of the projects covered by the 31 licenses, 27, involving an estimated installation when completed of 1,951,800 horsepower, were either completed or under construction at the close of the fiscal year. This is 30 per cent more than was constructed under Federal authorization in the 20 years preceding the passage of the Federal water power act. The commission also rendered decisions during the year upon 22 declarations of intention, passed upon restorations to entry in 163 cases, and made withdrawals of 675,000 acres of public lands in connection with applications for power projects.

#### NAVIGABLE WATERS.

The first annual report contained a general discussion of the jurisdiction of the commission and the principles which must underlie its determination whether any particular stream is navigable and therefore within its jurisdiction. There has been criticism in certain quarters that neither this discussion nor the definition of navigable waters as contained in the act itself is sufficiently clear, and that the act should be so modified or the definition so interpreted by the commission that the limit of navigability on any stream may be determined with such exactness that no one need ever be in doubt or need ever apply to the commission for its determination.

The question of navigability is not one of mathematical formulas, and there is no more probability that it can be removed from the domain of individual judgment than that our laws in general can

be drawn with such precision that the services of the courts in their interpretation can be dispensed with. The decisions of the commission in the individual cases presented to it will establish precedents which will gradually clear the situation. Three recent cases on interstate streams, the Saco River,<sup>2</sup> running from New Hampshire into Maine, the Connecticut, a boundary between New Hampshire and Vermont, and the Menominee, a boundary between Wisconsin and Michigan, are indicative of the policy the commission is pursuing.

The first two are actually carrying property in interstate commerce in considerable quantities in the form of logs and pulp wood, and the third is suitable for such use. All three are, therefore, technically navigable; but due to the fact that in each instance the laws of the State afford full protection to such commerce, and that the proposed dams would not obstruct it, the commission made formal finding that the streams were not "navigable waters" within the definition of the act, that the proposed dams would not affect the interests of interstate commerce, and that, therefore, no Federal license was required for their construction. The commission does not propose to extend its jurisdiction in this respect beyond the point where some substantial interest of interstate or foreign commerce is involved.

#### DEPRECIATION AND ACCOUNTING.

As set forth in detail in the first annual report, the existing regulations of the commission on depreciation and on accounting were adopted after many conferences with interested individuals and organizations and after substantial agreement had been reached with a committee representing the National Electric Light Association. Nevertheless, when the matter of a system of accounting was under consideration the association asked that the entire matter be reopened and it be granted further hearing. This was done on November 21, 1921. In view of the fact that at this hearing the regulations were attacked on grounds both of law and of policy it seemed desirable to have a legal interpretation of the act and of the powers and duties of the commission. The several matters were accordingly referred to the chief counsel, who made a careful study of the act, of similar State statutes, of decisions of courts and commissions, and of the debates in Congress when the several provisions of the act were under consideration. The National Electric Light Association and the National Association of Railway and Utilities Commissioners were invited to submit briefs, and did so. These briefs, together with the opinions of the chief counsel, were, in accordance with the commission's customary procedure, submitted to the chief law officers of

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<sup>2</sup> For the commission's findings in full, see Appendix B, pages 151, 152, and 165.



the three departments represented on the commission, and the opinions of the chief counsel received their unanimous concurrence. The opinions were adopted as decisions of the commission at its meeting of July 26, 1922.<sup>a</sup>

With respect to depreciation the decision of the Commission holds that the primary purpose of accounting for depreciation under the Federal water power act is that reserves may be established and maintained sufficient for offsetting the reduction in service value due to accruing depreciation from whatever cause and for maintaining the original investment unimpaired and adequate for renewing and replacing, so far as respects their original costs, units of equipment or structures when their useful lives expire; that the act requires an accounting for depreciation substantially as set forth in the existing regulations of the commission; that such regulations are not inconsistent with the act, but on the contrary are necessary and proper for the purpose of carrying out the provisions of the act; and that the definition of depreciation and the amendment of the regulation proposed at the hearing are not in conformity with the act, and if adopted would not make it possible to carry out the provisions of the act.

While the commission is not fully convinced that the provisions of the act with respect to depreciation are in conformity with the wisest public policy or are necessarily in the best interests of the rate payers in the long run, and while it believes that the question should be approached primarily from the rate payer's standpoint, it is convinced that no interpretation other than in the decision rendered can properly be placed upon the provisions of the act.

In connection with its decision the commission approved such amendment of regulation 16 as would leave it optional with licensees whether they account for depreciation on the "straight-line" or the "sinking-fund" basis, and it authorized the executive secretary to confer with representatives of the National Electric Light Association or other interested parties with a view to presenting to the commission proposals for such a degree of flexibility in annual charging of accruing depreciation as will give due consideration to the maintenance both of the financial credit and of the capital assets of licensees.

With respect to accounting the decision of the commission cites authorities to show that permissive words in a statute conferring powers on a public officer are to be construed as peremptory where the power exercised concerns the public interest if such construction will carry into effect the intent and object of the statute. The decision takes up in detail the several provisions of the act which

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<sup>a</sup> For opinions in full see pages 226 and 244, Appendix D.

make it necessary to establish a system of accounts and to require reports and statements giving the information necessary to enable the commission to perform the duties imposed by the act, and quotes at length from the debates in the House when the act was under consideration, showing that it was the purpose to require the commission to establish a system of accounts such as will show at any time the net investment in the project as defined in the act, and such as will enable the commission to carry out the duties imposed by the act.

#### ATTACKS UPON THE ACT.

On June 24, 1922, the State of New York filed a bill in the Supreme Court of the United States asking that the commission be enjoined from enforcing within the State of New York certain provisions of the Federal water power act, alleged to be in excess of the constitutional authority of the United States, or any interpretation thereof which would trespass upon the rights of the State. The matter has been set for argument January 2, 1923.

Of equal importance and perhaps of greater danger are the indirect attacks on the act. There are movements on foot in several quarters to secure for certain sites or streams special legislation, which if approved would constitute a partial repeal of the Federal water power act, and would eventually result in the progressive disintegration of our present national water-power policy. If these proposals that rights or authorities be granted independently of the present law be examined, it will be found that some or all of the essential features of the act, particularly those that protect the public interest, have been omitted, even when provisions in direct conflict have not been substituted. Furthermore, the granting of special privileges to favored interests would clearly discriminate against those who, in the faith that Congress had at last fixed its policy, are investing hundreds of millions of dollars under the obligations of the act. The results already accomplished afford convincing evidence that grants of special privileges are not necessary in order to secure the development of all the electric energy that the market can absorb. Congress made no mistake in its declaration of policy in the act of 1920, but it would be a serious mistake to permit that policy to be essentially modified. The proposals for special legislation are primarily attempts to circumvent the present law. If successful, they would be dangerous not only in themselves but as precedents for similar action in the future. Having spent 10 years in discussing and developing a national water-power policy and having written such a policy into legislation, it would be most unwise, even though the act were not successful, to permit the law or the policy which it expresses to be essentially modified, except after fair trial and convincing evidence of the desirability of change. To proceed to modify

it directly or indirectly when it is proving to be a distinct success would be folly. In any case modification should come as a change in the general law after due consideration by Congress and not as special legislation applicable to a particular site.

#### ORGANIZATION.

By the terms of the Federal water power act the commission is required to investigate all projects applied for to determine whether the structures are safe and properly designed and whether full utilization will be made of the resources of the stream. It is required to make valuations of all properties licensed under the act and constructed prior to the issuance of license. When declarations are filed of intention to construct dams in streams whose navigable status is doubtful, it must investigate and determine whether the interests of interstate or foreign commerce would be affected. It must investigate and pass upon applications for restoration to entry of lands within power-site reserves. It is required to establish a system of accounting to be applied to the operations of its licensees and by means of which the net investment in the properties may always be known. It must assume ultimate responsibility for seeing that licensed projects are properly maintained and that adequate depreciation reserves are established. It has already had many difficult administrative and legal problems to meet in the interpretation of the act, and it must be prepared to assist in the defense of the act before the courts.

To perform the greatest task with respect to water powers that the Government has ever had, Congress gave the commission no personnel other than its executive secretary and engineer officer, but obliged it to borrow for its work such personnel as the departments could spare and were willing to loan. It has been operating two years under these unsatisfactory conditions with a detail of 8 engineers, 2 attorneys, 2 accountants, and 18 clerks—a force utterly inadequate to perform the duties placed upon it by the act. The commission has no field force of its own, loaned or otherwise, but must depend for examinations and reports and for the conduct of field hearings upon the field officers of the departments—men who are primarily responsible for their own departmental duties. It was given originally an appropriation of \$100,000. The amount was repeated for 1922. For 1923 it has only the unexpended balance of the first year's appropriation.

Under such circumstances the commission has been obliged to delay action on many important projects, and it has been forced to omit altogether the performance of important duties required by the act. This is particularly true of valuations, of which cases involving approximately \$100,000,000 are now awaiting action. The commis-

sion has been unable to secure the detail of any personnel with adequate experience in valuation work and has therefore been obliged either to suspend issuance of licenses where valuations are involved or to provide for valuations in the future. It has taken the latter course in order that much needed power development might proceed. Such a course, however, is almost certain to result in prolonged litigation and in expenses many times greater than would have been required had the commission been given in the beginning the means for carrying out this requirement of the law.

In its first annual report the commission said: "What is seriously needed in the interest of adequate administration of the act is a small organization of trained and experienced men capable of meeting intelligently the important and perplexing engineering and economic problems which are constantly arising and upon the correct solution of which will depend the value of the legislation and, in no small degree, the future of the electric power industry." The experience of the past year merely lends further emphasis to this statement.

The chief purpose in the creation of the commission was to secure a common policy and a single executive agency in water-power administration. Due to the situation in which the commission has been placed, this purpose has not been accomplished. Other agencies have been required to continue their independent activities, and these activities are not controlled by a common plan and are not subject to a common direction. This defect will not be cured, the policy of Congress can not be fully executed, and the commission will not be able to perform in full the duties plainly intended by the act until it is given authority to employ an adequate personnel of its own for its Washington office, and until it is given the administrative authority over all Federal water-power grants whether issued under the existing or under prior laws. It is important that amendment of the act in these respects be no longer delayed. Having waited 10 long years for a legislative pronouncement of a Government policy respecting the utilization of our huge water-power resources, we should not be required to wait another long period of years before means are provided for the execution of that policy.

There is more water-power development under way at the present time than at any previous period in our history. The greater part of it is being developed under the provisions of the Federal water power act. There is much more waiting to be used. If we are to preserve our diminishing fuel supply, are to reduce the burden of coal transportation, are to increase the supply of electric energy and reduce its cost, we must utilize our water powers to the fullest practicable extent. Eighty-five per cent of our potential water powers are

under Federal control. We have a law which, though by no means perfect, does provide reasonably satisfactory conditions and under which large-scale development is proceeding. Instead of being obliged to drift along with an administration of the law which, under existing circumstances, is necessarily insufficiently coordinated and only partially effective, the obstacles should be cleared away, and there should be substituted a positive attitude of encouragement and assistance in water-power development.

## 2. PERSONNEL.

Except for minor changes in personnel, the commission's staff has remained unaltered throughout the year. It still has under its direct employment only one individual, its executive secretary, and one detail authorized by the act, its chief engineer. The remainder of its personnel, consisting of 8 engineers, 2 attorneys, 2 accountants, 2 draftsmen, 13 clerks, and 2 messengers, are merely loaned to the commission by the several departments, are paid from departmental appropriations, and are subject to recall at the option of the departments.

The commission has no field force, loaned or otherwise, but depends entirely on the field forces of the three departments to carry on its work. So far these forces have been called upon for investigations and reports on power projects, for the supervision of preliminary permits and licenses granted, and for carrying out certain special investigations, such as the studies of the Deschutes and Columbia Rivers, and of the power possibilities in southeastern Alaska. In general the work has been divided among the three departments according to the primary interest involved; that is, applications affecting navigable rivers are referred to the Corps of Engineers, those affecting national forests to the Forest Service, and those affecting public lands and Indian reservations to the Geological Survey. The supervision of all steam-gauging work in connection with permits or licenses is, however, referred to the Geological Survey because of its special experience in and facilities for this work. All three agencies have consistently shown a hearty spirit of cooperation. Delays in submitting reports have been reasonable and are diminishing as all concerned learn more fully the requirements of the act.

## 3. RULES AND REGULATIONS.

During the fiscal year ended June 30, 1922, no amendments to or modifications of the general rules and regulations were approved, but certain of the regulations have been the subject of discussion and hearings, and the question of amending or modifying them is under consideration.



In the first annual report (pp. 17-20) mention was made of the procedure which had been followed, the investigations which had been made, and the conferences and hearings which were had prior to the adoption on June 6, 1921, of the amended rules and regulations now in effect. The amended rules and regulations, however, proved not to be entirely satisfactory to certain interests, and on November 21, 1921, upon application, a hearing was had before the commission, at which amendments to and modifications of regulation 16, "Depreciation reserves," regulation 17, "Amortization reserves," and regulation 20, "Accounts and reports," were urged. Questions were raised at the hearing which seemed to require an interpretation of certain provisions of the act and a determination of the commission's authority and obligations in the administration of the act. The matter was therefore referred to the chief counsel for an opinion on the questions at issue, and the commission's decisions of July 26, 1922, on "Depreciation" and on "Accounts and reports" resulted. The questions submitted and a résumé of the opinions follow. The decisions in full are shown at pages 226 and 244 of Appendix D.

With respect to depreciation the chief counsel was requested to advise:

(a) Whether the authority of the commission to prescribe rules for accounting for depreciation is, in fact, limited to the provisions of section 10, subsection (c), of the act, and, if not, what are the limits of its authority:

(b) What is the meaning of the terms "depreciation" and "depreciation reserves," as used in the act; for what purpose or purposes was it intended that depreciation reserves should be established and maintained; and whether the rules for accounting for depreciation as contained in regulation 16 are consistent with the act, and with other legislation of Congress, and necessary and proper for the purpose of carrying out the provisions of the act; and

(c) Whether the definition of "depreciation," as proposed by representatives of the National Electric Light Association and the proposed methods of accounting therefor, are consistent with the act, and if adopted by the commission would make it possible to carry out the provisions of the act?

The chief counsel, after reviewing the use of the word "depreciation," in other provisions of the act and in Federal statutes *in pari materia*, and as defined in decisions of Federal courts and Federal and State commissions, held that the primary purpose of accounting for depreciation under the Federal water power act is that reserves may be established and maintained sufficient for offsetting the reduction in service value due to accruing depreciation from whatever cause, and for maintaining the original investment unimpaired and ade-

quate for renewing and replacing, so far as respects their original costs, units of equipment or structures when their useful lives expire. He was also of the opinion that the act requires an accounting for depreciation substantially as set forth in the existing regulations of the commission; that such regulations are not inconsistent with the act, but on the contrary are necessary and proper for the purpose of carrying out the provisions of the act; and that the definition of depreciation as proposed by the representatives of the National Electric Light Association and the amendment of the regulation proposed by them with respect to accounting for depreciation are not in conformity with the act, and if adopted would not make it possible to carry out the provisions of the act.

The commission also approved such amendment of regulation 16 as would make it optional with licensees whether they account for depreciation on the "straight-line" or the "sinking fund" basis; and authorized the executive secretary to confer with the water power development committee of the National Electric Light Association, or other interested parties, with a view to presenting to the commission proposals for such a degree of flexibility in annual charging of accruing depreciation as would give due consideration to the maintenance both of the financial credit and of the capital assets of licensees.

With respect to accounting, the chief counsel was requested to advise:

(a) Whether, under the provisions of section 4, subsection (f), of the act, it is within the discretion of the commission to prescribe or not to prescribe a system of accounts, or to require or not to require the submission of reports and statements as therein specified.

(b) What is the limitation placed upon the commission in prescribing "rules and regulations for the establishment of a system of accounts, and for the maintenance therefor by licensees" by the provision contained in the definition of "net investment" in section 3 of the act, namely, "said classification of investment of the Interstate Commerce Commission shall in so far as applicable be published and promulgated as a part of the rules and regulations of the commission"?

(c) What would be the effect, if any, of said provision, or other provisions of the act, upon the authority of the commission to adopt *in toto* the system of accounting recommended by a committee of the National Association of Railway and Utilities Commissioners?

In his opinion the chief counsel cited authorities to show that permissive words in a statute conferring powers on a public officer are to be construed as peremptory, where the power to be exercised concerns the public interest, if such construction will carry into

effect the intent and object of the statute. He took up in detail the several provisions of the act which make it necessary to establish a system of accounts and to require reports and statements giving the information necessary to enable the commission to perform the duties imposed by the act, and quoted at length from the debates in the House when the act was under consideration, showing that it was the purpose to require the commission to establish a system of accounts such as will show at any time the net investment in the project as defined in the act, and such as will enable the commission to carry out the duties imposed by the act. He also set forth the points in respect to which the tentative draft of the National Association of Railway and Utilities Commissioners, which the commission had been urged to adopt, failed to meet the requirements of the Federal water power act.

The amendment of regulation 16, referred to above, has not yet been adopted but is still under consideration. A further modification of or amendment to regulation 17 "Amortization reserves," is also being considered, but no final action has as yet been taken. A revision of regulation 15, relating to benefits from headwater improvements, has been given considerable study with a view to setting up the procedure to be followed in carrying out this provision of the act in a clearer and more definite way than does the existing regulation.

#### 4. SUMMARY OF THE YEAR'S WORK.

##### ENGINEERING DIVISION.

The office force for carrying on the work of this division remained the same as for the previous fiscal year; that is, one chief engineer, seven assistant engineers, one junior engineer, two draftsmen, and five stenographers and clerks. The field work was conducted by the district engineers of the Engineer Department, the Geological Survey, and the Forest Service.

No exact information is available of the number of persons and the amount of time employed by the three departments in carrying out this work, but the district engineers of 26 districts of the Engineer Department, 16 districts of the Geological Survey, and all of the 8 districts of the Forest Service were called upon for work. Reports submitted indicate that, in addition to the 50 district engineers, about 50 assistant engineers were also engaged part of the time on work for the commission. In the majority of the districts only a small part of the time of the personnel was devoted to the commission's work, but in California the full time of several engineers was required, and in Oregon, Washington, Idaho, Minnesota, Arkansas, and Alabama considerable attention was given to the work by the district offices.

The approximate cost of the field administration of the act during the fiscal year as reported by the three departments was \$42,000, of which \$12,000 were funds of the commission used to defray non-personal-service expenditures and \$30,000 represented the prorated salaries of field officials and clerks of the three departments for the proportion of their time which was devoted to the work of the commission.

#### Applications Filed.

During the fiscal year there were filed 92 new applications, of which number 69 were for preliminary permits and 23 were for licenses, these latter being divided as follows: Eight for major projects, six for projects of less than 100 horsepower, and nine for transmission lines. The 92 applications represent, after deducting for conflicting applications and for those withdrawn or rejected, a total of 2,800,000 primary horsepower and an estimated installed capacity of 5,000,000 horsepower. Of these 92 applications, 32 affect navigable rivers, 30 public lands, 4 Indian reservations, and 46 national forests.

The total number of applications filed to June 30, 1922, was 321—231 for preliminary permits and 90 for licenses; representing an aggregate of 12,500,000 primary horsepower net and an estimated aggregate installed capacity of 20,000,000 horsepower.

The following table shows the distribution of the 321 applications by States:

TABLE NO. 1.—*Distribution of active applications by States to June 30, 1922.*

[The figures in parentheses indicate the number of applications for transmission lines.]

State.	Number of applications.	Gross horsepower (no deductions made for conflicting applications).	
		Primary (90 per cent of time).	Estimated installed capacity.
Alaska.....	33	306,425	414,215
Alabama.....	8	42,130	104,000
Arizona.....	14—(1)	6,132,670	8,231,000
Arkansas.....	6	112,000	230,200
California.....	86—(12)	2,816,300	5,631,310
Colorado.....	7—(2)	154,662	222,860
Connecticut.....	2	50,000	50,000
District of Columbia.....	1	47,300	50,000
Delaware.....			
Florida.....	6	9,900	24,500
Georgia.....			
Idaho.....	15—(2)	104,450	209,160
Illinois.....	2	42,850	54,250
Indiana.....			
Iowa.....	1	400	2,700
Kansas.....			
Kentucky.....	4	95,150	190,250
Louisiana.....	1	40,000	55,000
Maine.....			
Maryland.....			
Massachusetts.....			
Michigan.....	1	1,700	7,600
Minnesota.....	9	62,230	127,100
Mississippi.....			

TABLE NO. 1.—*Distribution of active applications by States—Continued.*

State.	Number of applications.	Gross horsepower (no deductions made for conflicting applications.	
		Primary (90 per cent of time.)	Estimated installed capacity.
Missouri.....	4	24,500	55,000
Montana.....	16—(3)	377,985	699,720
Nebraska.....	2—(2)		
Nevada.....			
New Hampshire.....			
New Jersey.....	3	550,400	662,300
New Mexico.....	1	900	1,350
New York.....	9	2,404,925	3,072,830
North Carolina.....	4—(1)	9,160	16,400
North Dakota.....			
Ohio.....	2	780	800
Oklahoma.....	3	34,880	54,000
Oregon.....	15—(1)	751,170	1,509,440
Pennsylvania.....	4	108,000	359,000
Rhode Island.....			
South Carolina.....	2—(1)	2,000	8,000
South Dakota.....	1—(1)		
Tennessee.....	1	1,000	2,000
Texas.....			
Utah.....	8	1,581,865	2,238,665
Vermont.....			
Virginia.....	3	29,880	110,130
Washington.....	18	1,166,690	2,040,410
West Virginia.....	2	31,200	50,000
Wisconsin.....	1	10,043	20,000
Wyoming.....	4	2,710	4,710
Total.....	299—(20)	17,198,245	26,568,940

NOTE.—Figures represent gross horsepower, i. e., no deductions for amounts in conflict; and all applications are included which had not been disposed of prior to June 30, 1921.

During the year 118 applications were acted upon or otherwise disposed of, i. e., granted, rejected, or withdrawn; and 158 were awaiting action at the close of the period. Of the latter number, action on 28 was being withheld because the proposed projects involve the St. Lawrence, Colorado, Columbia, or Potomac, or because some other reason exists to make it inadvisable to act on the applications under the present circumstances. Failure on the part of the applicant to furnish sufficient data to enable the commission to act intelligently on the application was the reason for not acting on 29 applications. Action on the remaining 98 was delayed pending completion of the required period of advertising, because of conflicting claims or protests, or because of delays in obtaining field reports on the proposed projects.

During the year 72 new applications were referred to field offices of the departments for field examination and report, and 117 such reports were received. There were pending at the close of the year 52 reports. Hearings were ordered in 14 cases, 26 hearings were held, and 6 hearings were pending. A hearing was held before the commission itself on the conflicting applications of the city of

St. Paul, the city of Minneapolis, and the Northern States Power Co. for the right to develop power at the United States Government dam in Mississippi River between the two cities.

The following table shows the distribution of field work among the three departments:

TABLE No. 2.—*Applications referred to the departments for field examinations, hearings, and reports; and preliminary permits and licenses referred for supervision.*

TOTALS TO JULY 1, 1922.

Department.	Engineering reports.		Administrative reports.		Hearings.		Licenses and permits referred for field supervision.	Licenses and permits referred for supervision over stream gauging.	Total referred.
	Re-quested.	Re-ceived.	Re-quested.	Re-ceived.	Or-dered.	Re-ported.			
War.....	61	52	2	1	18	17	25	0	106
Interior.....	37	34	16	16	5	5	6	41	105
Agriculture.....	105	65	37	37	17	12	52	10	221
Total.....	203	151	55	54	40	34	83	51	432

DURING THE FISCAL YEAR ENDING JULY 1, 1922.

War.....	31	37	2	1	9	12	5	0	47
Interior.....	5	32	12	12	1	5	0	41	59
Agriculture.....	36	48	26	26	4	9	2	10	78
Total.....	72	117	40	39	14	26	7	51	184

#### Permits and Licenses.

The commission authorized during the fiscal year 45 preliminary permits and 34 licenses. Of the latter number 18 were for major projects, 7 for projects of less than 100 horsepower, and 9 were for transmission lines. Of the 79 projects covered by preliminary permit or license, 21 affected navigable rivers, 29 public lands, 6 Indian reservations, and 49 national forests. The following tables show the preliminary permits and licenses granted prior to June 30, 1921, and during the fiscal year ending June 30, 1922, the primary and installed horsepower involved in each case, the totals for the year, and the aggregate for the two periods:

TABLE No. 3.—Permits authorized.

Permittee.	Stream.	State.	Project No.	Horsepower.		Period, years.
				Primary.	Installed capacity.	
FISCAL YEAR 1921.						
Dixie Power Co.	White River.	Arkansas.	1	55,500	100,000	2
Washington Irrigation & Development Co.	Columbia River.	Washington.	3	210,000	300,000	3
Roanoke River Development Co.	Roanoke River.	Virginia.	7	10,500	50,000	3
Pitt River Power Co.	Pitt River.	California.	9	75,100	135,000	1½
Hydraulic Race Co.	Barge Canal.	New York.	15	12,500	12,500	1½
Utah Power & Light Co.	Bear River.	Idaho.	20	21,500	50,000	2½
Lower Niagara River Power & Water Supply Co.	Niagara River.	New York.	24	200,000	250,000	3
Illinois State of.	Illinois River.	Illinois.	48	41,450	50,000	3
United Mills Co.	Harpers Creek.	North Carolina.	69	1,450	1,400	1½
Granite Falls Manufacturing Co.	Wilson Creek.	do.	81	2,640	5,000	1
Merced Irrigation District.	Merced River.	California.	88	10,000	20,000	1
Great Basin Power Co.	North Fork Duchesne River and Wolf Creek.	Utah.	113	3,950	10,000	2
Grand, James B.	Colorado River.	Arizona.	121	139,300	200,000	1½
Total			13	793,520	1,135,900	
FISCAL YEAR 1922.						
Sound Power Co.	Sultan River and Olney Creek.	Washington.	10	71,400	142,800	2
Big Horn Canyon Irrigation & Power Co.	Big Horn River.	Montana.	12	97,070	210,000	2
Western Tie & Timber Co.	Current River.	Missouri.	17	4,000	15,000	2
Banks, W. R.	Osage River.	do.	21	4,000	4,000	2
Hawley, R. W.	Silver Creek.	California.	32	44,680	75,000	1½
Dothan, City of	Choctawhatchee River.	Alabama.	52	3,570	6,000	1½
Bingham, Reed	Perdido, Styx, and Blackwater Rivers.	Florida.	55	5,120	10,000	2
Wrangell Pulp & Paper Co.	Harding and Grant Creeks.	Alaska.	61	1,280	1,280	2
McDonald, R. G.	Convict Creek.	California.	75	12,000	3,550	2
Baum, Frank G.	Little Colorado River.	Arizona.	80	17,700	24,000	2
Leighton, Joseph B.	Yellowstone River.	Montana.	109	1,500	15,000	2
Ballaine, Frank L.	Kenai River.	Alaska.	119	1,500	15,000	2
Southern Sierras Power Co.	Whitewater River.	California.	128	2,400	15,000	2
Mazatel, Geo. C.	Silver Lake.	Alaska.	133	220	1,500	2
Mushen, S. A., and Cronemiller, G. D.	Deep and Canas Creeks.	Oregon.	143	230	1,800	1
Elmore Copper Co.	South Fork Boise River.	Idaho.	154	6,000	6,000	1
Alaska Development & Mineral Co.	Anan and Tye Creeks and White River.	Alaska.	157	18,200	28,000	2
Boise, City of	Payette River, north and south forks.	Idaho.	159	11,950	30,000	1½
Alaska Public Utilities.	Power Creek.	Alaska.	160	1,000	1,340	2
Myser, J. F., and Drach, F. E.	Frederickman Creek.	Colorado.	163	50,000	100,000	2
Louisiana Gravity Canal Co.	Calcasieu River and Bayou Cocodrie.	Louisiana.	172	40,000	55,000	2
Connecticut River Co.	Connecticut River.	Connecticut.	173	20,000	20,000	1½

TABLE NO. 3.—Permits authorized—Continued.

Permittee.	Stream.	State.	Project No.	Horsepower.		Period, years.
				Primary.	Installed capacity.	
FISCAL YEAR 1922—continued.						
Oklawaha Reclamation Farms.....	Oklawaha River.....	Florida.....	177	500	1,000	3
Utah Power & Light Co.....	Pole Creek and Uintah River.....	Utah.....	180	2,425	2,425	14
Columbia Railway & Navigation Co.....	Santee and Cooper Rivers.....	South Carolina.....	189	2,000	8,000	2
Petersburg, Town of.....	Crystal Lake.....	Alaska.....	201	1,000	1,000	2
Hirst-Chicago Mining Co.....	Head of Didrickson Bay.....	do.....	212	400	400	2
Dixie Power Co.....	North fork White River.....	Arkansas.....	214	20,000	35,000	2
Hawley, C. B.....	New River.....	West Virginia.....	223	11,200	20,000	3
Washington Water Power Co.....	Columbia River.....	Washington.....	229	120,000	153,400	3
Portland Railway Light & Power Co.....	Clackamas River.....	Oregon.....	234	34,000	88,600	3
Northern States Power Co.....	Mississippi River.....	Minnesota.....	250	10,300	20,000	3
Galvin, John G.....	Anna Creek.....	Alaska.....	257	9,480	12,000	24
Fort Klamath Meadows Co.....	French Creek.....	Oregon.....	259	2,160	4,880	14
Hughes, John H.....	Choctawhatchee River.....	Alabama.....	261	850	4,000	14
Northwestern Electric Co.....	North fork Lewis River.....	Washington.....	262	19,400	28,000	1
Hardaway, Benjamin H.....	Pea River.....	Alabama.....	264	900	3,000	2
Oskaloosa, City of.....	Des Moines River.....	Iowa.....	266	400	2,700	2
Wrangell, City of.....	Mill Creek.....	Alaska.....	268	500	500	2
Caddo River Power & Irrigation Co.....	Ouachita River.....	Arkansas.....	269	500	500	3
Hutton, McNear & Dougherty.....	Cascade Creek.....	Alaska.....	271	17,400	60,000	3
Brown, Edward T.....	Cub and Pitt Spring Runs.....	Virginia.....	275	23,700	34,000	14
St. Cloud Public Service Co.....	Mississippi River.....	Minnesota.....	283	130	34,000	2
Illinois, State of.....	Fox River.....	Illinois.....	285	4,600	6,000	2
			287	1,400	4,250	2
Total.....			45	683,765	1,299,075	.....
Grand total.....			58	1,457,285	2,405,975	.....



TABLE No. 4.—Licenses authorized.

Licensee.	Stream.	State.	Project No.	Horsepower.		Period, years.	Under construction.
				Primary.	Installed capacity.		
FISCAL YEAR 1921.							
Henry Ford & Son, Inc.	Hudson River	New York	13	3,640	8,100	50	Yes.
Niagara Falls Power Co.	Niagara River	do.	16	341,565	572,220	50	Yes.
Hill, Luther	Sawmill Creek	California	58	80	250	25	No.
Southern California Edison Co.	Big Creek	do.	67	188,000	545,000	60	Yes.
Amazon Dixie Mining Co.	Coosa River	Alabama	80	Transmission line.		25	Constructed.
Alabama Power Co.	do.	Alabama	82	21,760	110,000	60	Yes.
Paving Granite Quarry Co.	do.	South Dakota	83	Transmission line.		25	Constructed.
Coast Valleys Gas & Electric Co.	do.	California	87	Transmission line.		50	Do.
Home Colony	Kitty Creek	Wyoming	104	10	10	25	No.
Butte Jardine Metals Mines Co.	do.	Montana	107	Transmission line.		25	Constructed.
Love, John R., and von Brecht, G. A.	Salmon River	Idaho	126	400	400	20	Do.
Consolidated Spanish Belt Silver Mining Co.	do.	Nevada	131	Transmission line.		25	Do.
Southern California Edison Co.	do.	California	174	Transmission line.		60	Do.
Johnson, C. B.	do.	do.	192	Transmission line.		25	No.
Michell, Thomas F.	Colorado	Colorado	203	Transmission line.		25	No.
Total			15	525,395	1,235,990		
FISCAL YEAR 1922.							
Alaska Endicott Mining & Milling Co.	Lynn Canal	Alaska	63	350	1,000	25	No.
Rock Creek Power Co.	Rock Creek	Montana	70	1,060	1,880	50	No.
Snow Mountain Water & Power Co.	South fork Pei River	California	71	1,440	14,070	50	Yes.
Western States Gas & Electric Co.	do.	do.	73	6,400	8,800	50	Constructed.
Alaskan-American Paper Corporation	Steward Lake	Alaska	84	800	8,000	50	No.
San Joaquin Light & Power Corporation	San Joaquin River	California	108	10,523	45,000	50	Constructed.
Winconsin-Minnesota Light & Power Co.	Chippewa River	Wisconsin	120	10,643	27,000	50	Yes.
Southern California Edison Co.	Chalk Creek	California	130	55,000	186,000	50	Yes.
Eyre, Grace S.	Clackamas River	Oregon	135	25,300	30,000	50	No.
Portland Railway, Light & Power Co.	do.	Oregon	144	Transmission line.		50	Constructed.
Idaho Power Co.	Chewaucan River	Idaho	148	1,300	60	50	No.
Benefield, C. S.	Big Horn River	Wyoming	149	2,600		50	Constructed.
Wyoming Power Co.	do.	Wyoming	150	Transmission line.		50	Do.
Central Arizona Light & Power Co.	Snow Creek	Arizona	155	850	3,750	50	Yes.
Southern Sierras Power Co.	Muskrum River	California	166	210	250	50	No.
McConnellsville Malta Electric Co.	East and north forks Kings River	California	175	161,000	266,000	50	No.
San Joaquin Light & Power Corporation	do.	do.	180	Transmission line.		50	Yes.
Pacific Gas & Electric Co.	do.	do.	181	Transmission line.		50	Yes.

TABLE NO. 4.—*Licenses authorized—Continued.*

Licensee.	Stream.	State.	Project No.	Horsepower.		Period, years.	Under construction.
				Primary.	Installed capacity.		
FISCAL YEAR 1922—continued.							
El Dorado Power Co.	South fork American River	California.	184	30,000	100,000	50	Yes.
Southern Sierras Power Co.	High Creek et al.	do.	185	1,400	4,000	50	No.
Boston & Montana Milling & Power Co.	Beaver Falls Creek.	Montana.	198	Transmission line.	90	25	Yes.
George Inlet Packing Co.	Cann Creek.	Alaska.	206	75	75	50	Constructed.
Cann, J. H.	Fole Canyon Spring.	do.	213	60	40	25	No.
Blue Mountain Irrigation Co.	Small stream.	Utah.	226	100	100	25	Yes.
Freshwater Bay Lumber Co., Inc.	Denny Creek.	Alaska.	241	Transmission line.	100	25	Yes.
Darwin Silver Co.	Moose Creek.	California.	253	Transmission line.	30	50	Yes.
Weber, Henry.		Montana.	273	Transmission line.	291	50	Yes.
Southern Sierras Power Co.		California.	292	Transmission line.	295	50	Yes.
Karlst, Peter F.		North Carolina.	295	Transmission line.	4,890	50	Yes.
California-Oregon Power Co.	Kaweah River.	California.	298	4,890	9,990	50	Constructed.
Do.							
Black Mountain Telephone Corporation.							
Southern California Edison Co.							
Total.			34	315, 128	709, 305		
Grand total.			49	840, 523	1, 945, 295		

Of the projects, not including transmission lines, for which license has been authorized up to June 30, 1922, the following have been or are being constructed:

	Power capacity.	Installed horsepower.
No. 13, Henry Ford & Son (Inc.)-----	3, 640	8, 100
No. 16, Niagara Falls Power Co-----	341, 505	572, 230
No. 20, Utah Power & Light Co. (Soda-site)-----	5, 120	21, 000
No. 52, City of Dothan-----	3, 570	6, 000
No. 63, Alaska Endicott Mining & Milling Co-----	350	1, 000
No. 67, Southern California Edison Co-----	158, 000	545, 000
No. 77, Snow Mountain Water & Power Co-----	14, 400	14, 670
No. 78, Western States Gas & Electric Co-----	6, 400	8, 100
No. 82, Alabama Power Co-----	21, 760	100, 000
No. 96, San Joaquin Light & Power Corporation-----	10, 250	45, 000
No. 104, The Home Colony-----	10	10
No. 108, Wisconsin-Minnesota Light & Power Co-----	10, 043	20, 000
No. 120, Southern California Edison Co-----	55, 000	195, 000
No. 126, Love & Von Brecht-----	505	505
No. 135, Portland Railway Light & Power Co-----	25, 300	30, 000
No. 148, Benefiel, C. S-----	60	60
No. 149, Wyoming Power Co-----	1, 300	1, 300
No. 155, Southern Sierras Power Co-----	850	3, 750
No. 166, McConnelssville Malta Electric Co-----	210	250
No. 175, San Joaquin Light & Power Corporation-----	161, 000	266, 000
No. 184, El Dorado Power Co-----	30, 000	100, 000
No. 185, Southern Sierras Power Co-----	1, 400	4, 000
No. 206, George Inlet Packing Co-----	75	90
No. 213, El Nido Mining Co-----	60	75
No. 236, Blue Mountain Irrigation Co-----	40	40
No. 253, Weber, Henry-----	100	100
No. 298, Southern California Edison Co-----	2, 500	9, 500
Total-----	853, 448	1, 951, 780

Of the totals shown, however, about 25 per cent was developed and in operation prior to the granting of a license by the commission. The remaining 75 per cent represents construction under license.

An analysis of the applications granted up to November 1, 1922, has been made with a view to determining what will be the factors entering into the valuation of the projects as contemplated by the provisions of the act. This analysis shows that of 63 licenses authorized to November 1, 27 are major projects, 11 are minor projects, and 25 are transmission lines. No valuation work is contemplated in connection with minor projects and transmission lines. In addition to the 27 major projects licensed there are 5 constructed projects on which licenses are ready to issue, a total of 32.

Of the 32 major licenses, 26, with a power capacity of 872,770 horsepower, are under State regulation and 6, with a power capacity of 19,780 horsepower, are not. Fourteen of the 26 projects under State regulation have constructed works and require valuation under

section 23 of the Federal water power act. The estimated value of the constructed works is about \$84,000,000, about \$60,000,000 of which is in the Niagara Falls Power Co. The total value of property used in power business by the 26 licensees under State regulation is about \$750,000,000, and the value of the project works of the 26 licensees is about \$282,000,000.

Three of the six projects not under State regulation have constructed works and require valuation under section 23 of the act. The estimated value of the constructed works is \$750,000. The total value of property used to produce and distribute power by the six licensees is about \$5,150,000 and the value of the project works of these six licensees is about \$4,570,000. The accompanying tables give detailed data on the 32 major licenses.

TABLE NO. 5.—Major licenses under State regulation.

Company.	Stream.	State.	Project No.	Power capacity (horse-power).	Works constructed or under construction on date of license.	Estimated value of existing works to be valued under section 23, Federal water power act. <sup>1</sup>	Estimated value of all property owned by licensees on date of license. <sup>2</sup>	Estimated additional investment by date project works are completed.	Estimated value of all property of licensees on date of completion of project works. <sup>3</sup>	Estimated value of project works. <sup>3</sup>
1. Niagara Falls Power Co.	Niagara River	New York	16	341,505	Yes	\$59,127,000	\$59,127,000	\$10,572,200	\$69,699,200	\$69,699,200
2. Southern California Edison Co.	Big Creek	California	67	195,000	Yes	3,000,000	119,860,900	143,282,900	262,643,800	63,608,900
3. Do.	San Joaquin River	do	120	55,000	No	3,000,000				13,089,000
4. Do. <sup>4</sup>	Kaweah River	do	288	4,860	Yes					11,001,000
5. Alabama Power Co.	Coosa River	Alabama	52	21,760	No		43,920,500	23,001,000	66,921,500	1,001,000
6. Snow Mountain Water & Power Co.	South Fork, Eel River	California	77	14,400	Yes	5,000,000	5,000,000	2,213,000	7,213,000	7,213,000
7. Wisconsin-Minnesota Light & Power Co.	Chippewa River	Wisconsin	108	10,040	No		17,000,000	283,000	17,283,000	283,000
8. Western States Gas & Electric Co.	South Fork, American River	California	78	6,400	Yes	2,400,000	13,960,000	13,750,000	27,710,000	2,400,000
9. Do. <sup>4</sup>	Canyon Creek	do	99	260	Yes	450,000				450,000
10. McConnsville-Malta Electric Co.	Washington River	Ohio	166	210	Yes	19,000	19,000	15,000	34,000	34,000
11. El Dorado Power Co.	South Fork, American River	California	184	30,000	Yes	800,000		13,800,000	13,800,000	13,800,000
12. Rock Creek Power Co.	Rock Creek	Montana	70	1,060	No		0	200,000	200,000	200,000
13. Fynn Creek B.	Chalk Creek	Colorado	130	560	No		30,000	70,000	100,000	70,000
14. Southern Sierras Power Co.	High Creek et al	California	185	1,400	No		7,421,900	1,288,500	8,708,400	630,200
15. Do.	Snow Creek	do	155	880	No					650,300
16. San Joaquin Light & Power Corporation.	San Joaquin River	do	98	10,260	Yes	7,051,200	32,719,600	95,800,000	128,519,600	7,051,200
17. Do.	East and North Forks, Kings River	do	175	161,009	No					50,960,000
18. Do. <sup>4</sup>	Kern River	do	178	4,900	Yes	2,350,000				2,331,000
19. Portland Railway Light & Power Co.	Clackamas River	Oregon	135	25,300	Yes	231,000	48,800,000	5,935,600	54,735,600	2,825,600
20. Utah Power & Light Co. <sup>4</sup>	Bear River	Idaho	20	5,120	No		60,200,000	5,480,000	65,680,000	2,480,000
21. Yuba Development Co. <sup>4</sup>	North Fork, Yuba River	California	187	8,000	Yes	400,000	400,000	946,000	1,346,000	1,346,000
22. Little Rock Power & Water Co.	Little Rock Creek	do	191	475	No		0	673,200	673,200	673,200
23. Caddo River Power & Irrigation Co. <sup>4</sup>	Onachita River	Arkansas	271	17,400	No		0	8,744,800	8,744,800	8,744,800
24. Clarion River Power Co.	Clarion River	Pennsylvania	309	1,350	No		0	9,010,000	9,010,000	6,460,000
25. Grangeville Electric Light & Power Co. <sup>4</sup>	Clearwater River	Idaho	204	1,410	Yes	220,000	382,800	0	382,800	220,000
26. Wyoming Power Co. <sup>4</sup>	Big Horn River	Wyoming	149	1,300	Yes	220,000	312,450	0	312,450	220,000
Total				882,870	14	83,778,200	408,653,950	335,065,200	743,719,150	269,566,400

<sup>1</sup> Value of project works is taken from licensees' estimates.<sup>2</sup> License not yet executed.<sup>3</sup> Value of project works is taken from somewhat limited information.<sup>4</sup> Value of all property of licensees is estimated from somewhat limited information.<sup>5</sup> Value of all property of licensees is estimated from somewhat limited information.<sup>6</sup> Value of all property of licensees is estimated from somewhat limited information.

TABLE NO. 6.—Major licenses not under State regulation.

Company.	Stream.	State.	Project No.	Power capacity (horse-power).	Works constructed on date of license.	Estimated value of existing project works to be valued under section 23 Federal water power act.	Estimated value of all property owned by licensee on date of license. <sup>1</sup>	Estimated additional investment by date project works are completed.	Estimated value of all property of licensee on date of completion of project works. <sup>2</sup>	Estimated value of project works. <sup>3</sup>
1. Henry Ford & Son, Inc.	Hudson River	New York	13	3,640	None.	.....	( <sup>1</sup> ) \$2,225,000	\$2,225,000	\$2,225,000	\$2,225,000
2. Love, John R., & von Brecht, G. A.	Salmon River	Idaho	123	4,400	Yes.	\$40,000	( <sup>1</sup> ) 40,000	.....	40,000	40,000
3. Alaskan-American Paper Corporation.	Orchard Lake	Alaska	94	4,620	None.	.....	( <sup>1</sup> ) 746,400	746,400	746,400	746,400
4. Alaska Endicott Mining & Milling Co.	Lynn Canal	.....do.	63	350	Yes.	100,000	100,000	190,000	290,000	290,000
5. Dothan, City of	Choctawhatchee River	Alabama	52	3,570	None.	.....	.....	1,250,000	1,250,000	698,100
6. Crown Willamette Paper Co. (license not yet executed).	Willamette River	Oregon	38	7,200	Yes.	607,700	607,700	.....	607,700	607,700
Total	.....	.....	.....	19,780	3	747,700	747,700	4,411,400	5,189,100	4,567,200

<sup>1</sup> Value of all property of licensees is estimated from somewhat limited information. No estimates have been made of industrial property for which power is furnished.

<sup>2</sup> Value of project works is taken from licensees' estimates.

<sup>3</sup> No power property.

NOTE.—Two projects are in Alaska, one is municipal, and three are industrial. Three of the six require valuation under section 23.

Sixty-eight preliminary permits have been authorized and 64 of them are still outstanding. All preliminary permits are for major projects on which no construction has been done.

Of the 64 outstanding permits 40, involving a power capacity of 1,522,935 horsepower, will be subject to State regulation and 24, with a power capacity of 185,680 horsepower, will not. Of the 24 not subject to State regulation, 8 industrial and 4 public utilities are in Alaska, 5 are State and municipal projects, 2 are industrial projects in States with regulatory laws, and 5 are public utilities in States having no regulatory laws.

The estimated cost of the project works for the 40 projects subject to State regulation is \$438,000,000. It is estimated that an additional \$214,000,000 will have to be expended on transmission and distribution works not under license to permit the power to be utilized, making a total power investment for the 40 projects of \$652,000,000.

The estimated cost of these project works for the 24 projects not subject to State regulation is \$37,000,000. It is estimated that an additional \$7,000,000 will have to be expended on transmission and distribution works not under license to permit the power to be utilized, making a total power investment for the 24 projects of \$44,000,000. The accompanying tables give detailed data for the 64 projects under preliminary permit.

TABLE NO. 7.—Preliminary permits under State regulation.

Company.	Stream.	State.	Project No.	Power capacity (horse-power).	Estimated cost of project. <sup>1</sup>	Estimated cost of distribution and transmission systems.	Total cost.
1. Dixie Power Co.	White River.	Arkansas.	1	56,500	\$12,500,000	\$12,000,000	\$24,500,000
2. Washington Irrigation & Development Co.	Columbia River.	Washington.	3	210,000	30,000,000	45,000,000	75,000,000
3. Pitt River Power Co.	Pitt River.	California.	9	76,100	24,000,000	20,000,000	44,000,000
4. Hydraulic Race Co.	Barge Canal.	New York.	15	12,500	750,000		750,000
5. Lower Niagara River Power & Water Supply Co.	Niagara River.	do.	24	200,000	25,000,000	37,000,000	62,000,000
6. Roanoke River Development Co.	Roanoke River.	Virginia.	7	10,560	7,600,000	4,000,000	11,600,000
7. Utah Power & Light Co.	Bear River.	Idaho.	20	16,380	8,000,000	9,600,000	17,600,000
8. Great Basin Power Co.	North Fork Duchesne River and Wolf Creek.	Utah.	113	3,950	3,000,000		3,000,000
9. Grand, James B.	Colorado River.	Arizona.	121	139,300	55,000,000		55,000,000
10. Western Tie & Timber Co.	Current River.	Missouri.	17	2,250,000	2,250,000	2,250,000	4,500,000
11. Hawley, R. W.	Silver Creek.	California.	32	44,680	11,250,000		11,250,000
12. Connecticut River Co.	Connecticut River.	Connecticut.	173	20,000	3,000,000		3,000,000
13. Bingham, Reed.	Ferdido, Stix, and Blackwater Rivers.	Florida.	55	5,120	2,500,000		2,500,000
14. Louisiana Gravity Canal Co.	Calcasieu River and Bayou Cocodrie.	Louisiana.	172	40,000	11,000,000		11,000,000
15. Uintah Power & Light Co.	Pole Creek and Uintah Rivers.	Utah.	190	2,425	350,000		350,000
16. Banks, W. R.	Osage River.	Missouri.	21	4,000	800,000		800,000
17. Hawley, C. B.	New River.	West Virginia.	223	11,200	3,000,000		3,000,000
18. Elmore Copper Co.	South Fork Boise River.	Idaho.	154	6,000	1,200,000		1,200,000
19. Myser & Drach.	Fryingpan Creek.	Colorado.	163	50,000	17,500,000		17,500,000
20. Dixie Power Co.	North Fork White River.	Arkansas.	214	20,000	7,200,000	8,000,000	15,200,000
21. Hardaway, Benj. H.	Choctawhatchee River.	Alabama.	262	850	875,000		875,000
22. Do.	Pea River.	do.	266	900	600,000		600,000
23. Big Horn Canyon Irrigation & Power Co.	Big Horn River.	Montana.	12	97,070	21,000,000	15,000,000	36,000,000
24. Baum, Frank G.	Little Colorado River.	Arizona.	90	13,400	4,500,000		4,500,000
25. Mushen & Cronmiller.	Deep and Camas Creeks.	Oregon.	143	230	126,000	100,000	226,000
26. Portland Railway, Light & Power Co.	Clackamas River.	do.	234	34,080	3,000,000	10,000,000	13,000,000
27. Leighton, Joseph B.	Yellowstone River.	Montana.	109	7,700	2,500,000		2,500,000
28. Northwestern Electric Co.	North Fork Lewis River.	Washington.	264	19,400	4,200,000	4,000,000	8,200,000
29. McDonald, R. G.	Convict Creek.	California.	75	2,000	875,000		875,000
30. Brown, Edward T.	Pitt Spring Run and Cub Run.	Virginia.	283	130	160,000		160,000
31. Southern Sierras Power Co.	Whitewater River.	California.	124	2,400	875,000	750,000	1,625,000
32. Houston Power Co.	Choctawhatchee River.	Alabama.	276	600	500,000	300,000	800,000
33. Fort Klamath Meadows Co.	Anna Creek.	Oregon.	239	480	72,000		72,000
34. Sound Power Co.	Sultan River and Olney Creek.	Washington.	10	71,400	15,000,000	15,000,000	30,000,000
35. Washington Water Power Co.	Kettle Falls, Columbia River.	do.	229	120,400	71,000,000	20,000,000	92,000,000
36. California-Oregon Power Co.	Klamath River.	Oregon.	215	120,000	50,000,000	20,000,000	70,000,000
37. Columbia Valley Power Co.	Deschutes River.	do.	277	120,000	50,000,000	20,000,000	70,000,000
38. Pacific Power & Light Co.	do.	do.	277	27,200	4,400,000		4,400,000
39. Fletcher, Ed.	Boilder Creek.	California.	217	77,700	735,000		735,000
40. Do.	Santa Isabel River.	do.	282	1,800			
Total.				1,595,485	340,952,000	242,000,000	588,952,000

<sup>1</sup> Value of project works estimated from rather limited information.



TABLE No. 8.—*Preliminary permits not under State regulation.*

Company.	Stream.	State.	Project No.	Power capacity (horse-power).		Estimated value of project property. <sup>1</sup>	Additional estimated investment needed for distribution and transmission.	Total.
1. Merced Irrigation District.	Merced River	California	88	10,000	Municipal	\$7,326,000		\$7,326,000
2. Columbia Railway & Navigation Co.	Santees and Cooper Rivers	South Carolina	199	2,000	No State regulation	1,400,000		1,400,000
3. Wrangell Pulp & Paper Co.	Harding and Grant Creeks	Alaska	61	1,230	Pulp mill	250,000		250,000
4. Alaska Public Utilities.	Power Creek	do.	160	1,060	No State regulation	200,000		200,000
5. First-Chicago Mining Co.	Head of Didricksens Bay	do.	212	400	Mining	50,000		50,000
6. Hazlet, George C.	Silver Lake	do.	138	720	Pulp mill	140,000		140,000
7. Petersburg, Town of.	Crystal Lake	do.	201	1,000	No State regulation	130,000	\$75,000	205,000
8. Alaska Development & Mineral Co.	Tyce and Anan Creeks and White River	do.	157	18,200	Mining	2,360,000		2,360,000
9. Illinois, State of.	Illinois River	Illinois	48	41,450	State	9,500,000		9,500,000
10. Oklawaha Reclamation Farms.	Oklawaha River	Florida	177	5,500	No State regulation	1,450,000		1,450,000
11. Bannan, Frank L.	Seata River	Alaska	179	5,500	do.	1,777,000		1,777,000
12. Boise, City of.	North and South Forks Payette River	Idaho	139	11,000	Municipal	1,260,000	3,000,000	4,260,000
13. Hughes, J. H.	French Creek	California	263	2,100	Industrial	500,000		500,000
14. Galena, City of.	Des Moines River	California	263	2,100	Industrial	400,000		400,000
15. Galena, G.	Des Moines River	Iowa	263	9,800	Pulp Mill	1,000,000		1,000,000
16. Wainwright, City of.	Mill Creek	Alaska	260	500	No State regulation	100,000		100,000
17. Hutton, Melvair & Dougherty.	Cascade Creek	do.	273	23,700	No State regulation	1,800,000		1,800,000
18. Northern States Power Co.	Mississippi River	Minnesota	255	10,300	Pulp mill	3,000,000	3,000,000	6,000,000
19. Hardaway, Beni H.	Chinola River	Florida	303	1,780	do.	900,000		900,000
20. Mays & Gandy.	Huntington Creek	Utah	290	850	Mining	180,000		180,000
21. Willow Creek Mines.	Craigie Creek	do.	297	250	do.	75,000		75,000
22. Sawtooth Power Co.	Kruzsarnapa River	do.	218	33,120	Pulp mill	4,000,000		4,000,000
23. St. Cloud Public Service Co.	Mississippi River	Minnesota	285	4,600	No State regulation	900,000		900,000
24. Illinois, State of.	Fox River	Illinois	287	1,400	State	900,000		900,000
Total.				182,840		37,488,000	7,075,000	44,563,000

<sup>1</sup> Value of project works is estimated from somewhat limited information.

NOTE.—Five projects are State or municipal, 2 are industrial, 5 are public utilities in States without regulation, and 12 are in Alaska. Four of the latter are public utilities.

TABLE NO. 7.—Preliminary permits under State regulation.

Company.	Stream.	State.	Project No.	Power capacity (horse-power).	Estimated cost of project. <sup>1</sup>	Estimated cost of distribution and transmission systems.	Total cost.
1. Dixie Power Co.	White River.	Arkansas.	1	56,500	\$12,500,000	\$12,000,000	\$24,500,000
2. Washington Irrigation & Development Co.	Columbia River.	Washington.	3	210,000	30,000,000	45,000,000	75,000,000
3. Pitt River Power Co.	Pitt River.	California.	9	76,100	24,000,000	20,000,000	44,000,000
4. Hydraulic Race Co.	Barge Canal.	New York.	15	12,500	750,000		750,000
5. Lower Niagara River Power & Water Supply Co.	Niagara River.	do.	24	200,000	25,000,000	37,000,000	62,000,000
6. Roanoke River Development Co.	Roanoke River.	Virginia.	7	10,560	7,600,000	9,600,000	17,600,000
7. Utah Power & Light Co.	Bear River.	Idaho.	20	16,380	8,000,000	4,800,000	11,600,000
8. Great Basin Power Co.	North Fork Duchesne River and Wolf Creek.	Utah.	3	3,950	3,000,000		3,000,000
9. Girard, James B.	Colorado River.	Arizona.	121	139,300	55,000,000		55,000,000
10. Western Tie & Timber Co.	Current River.	Missouri.	17	4,900	2,250,000	2,250,000	4,500,000
11. Hawley, R. W.	Silver Creek.	California.	32	44,980	11,250,000		11,250,000
12. Connecticut River Co.	Connecticut River.	Connecticut.	173	20,000	3,000,000		3,000,000
13. Bingham, Reed.	Perdido, Styr., and Blackwater Rivers.	Florida.	55	5,120	2,500,000		2,500,000
14. Louisiana Gravity Canal Co.	Calcasieu River and Bayou Cocodrie.	Louisiana.	172	40,000	11,000,000		11,000,000
15. Uintah Power & Light Co.	Pole Creek and Uintah Rivers.	Utah.	190	2,425	350,000		350,000
16. Banks, W. R.	Osage River.	Missouri.	21	4,000	800,000		800,000
17. Hawley, C. B.	New River.	West Virginia.	223	11,200	3,000,000		3,000,000
18. Elmore Copper Co.	South Fork Boise River.	Idaho.	154	6,000	1,200,000		1,200,000
19. Myser & Drach.	Fryingpan Creek.	Colorado.	163	60,000	17,500,000		17,500,000
20. Dixie Power Co.	North Fork White River.	Arkansas.	214	20,000	7,200,000	8,000,000	15,200,000
21. Hardaway, Benj. H.	Choctawhatchee River.	Alabama.	262	850	875,000		875,000
22. Do.	Pea River.	do.	266	90	600,000		600,000
23. Big Horn Canyon Irrigation & Power Co.	Big Horn River.	Montana.	12	97,070	21,000,000	15,000,000	36,000,000
24. Baum, Frank G.	Little Colorado River.	Arizona.	90	13,400	4,600,000		4,600,000
25. Mushen & Cronmiller.	Deep and Camas Creeks.	Oregon.	143	250	129,000	100,000	229,000
26. Portland Railway, Light & Power Co.	Clackamas River.	do.	234	34,960	3,000,000	10,000,000	13,000,000
27. Leighton, Joseph B.	Yellowstone River.	Montana.	109	7,700	2,250,000		2,250,000
28. Northwestern Electric Co.	North Fork Lewis River.	Washington.	264	19,400	4,200,000	4,000,000	8,200,000
29. McDonald, R. G.	Convict Creek.	California.	76	2,900	875,000		875,000
30. Brown, Edward T.	Pitt Spring Run and Cub Run.	Virginia.	263	130	150,000		150,000
31. Southern Sierras Power Co.	Whitewater River.	California.	124	2,400	875,000	750,000	1,625,000
32. Houston Power Co.	Choctawhatchee River.	Alabama.	276	600	500,000	800,000	1,300,000
33. Fort Klamath Meadows Co.	Annas Creek.	Oregon.	259	460	72,000		72,000
34. Round Power Co.	Sultan River and Olney Creek.	do.	229	71,400	15,000,000	15,000,000	30,000,000
35. Washington Water Power Co.	Kettle Falls, Columbia River.	Washington.	10	120,000	20,000,000	20,000,000	40,000,000
36. California-Oregon Power Co.	Klamath River.	do.	215	136,000	15,000,000	15,000,000	30,000,000
37. Columbia Valley Power Co.	Deschutes River.	Oregon.	27	26,000	20,000,000		20,000,000
38. Pacific Power & Light Co.	do.	do.	272	27,200	2,400,000		2,400,000
39. Fletcher, Ed.	Boulder Creek.	California.	217	700	725,000		725,000
40. Do.	Santa Isabel River.	do.	232	1,800			
Total.				1,625,435	346,952,000	242,000,000	588,952,000

<sup>1</sup> Value of project works estimated from rather limited information.

TABLE No. 8.—*Preliminary permits not under State regulation.*

Company.	Stream.	State.	Project No.	Power capacity (horse-power).	Estimated value of project property. <sup>1</sup>	Additional estimated investment needed for distribution and transmission.	Total.
1. Merced Irrigation District.....	Merced River.....	California.....	88	10,000	\$7,326,000	.....	\$7,326,000
2. Columbia Railway & Navigation Co.....	Santee and Cooper Rivers.....	South Carolina.....	199	2,000	1,400,000	.....	1,400,000
3. Wrangell Pulp & Paper Co.....	Harding and Grant Creeks.....	Alaska.....	61	1,280	250,000	.....	250,000
4. Alaska Public Utilities.....	Power Creek.....	do.....	160	1,000	200,000	.....	200,000
5. Hirst-Chicago Mining Co.....	Head of Didricksens Bay.....	do.....	212	1,000	50,000	.....	50,000
6. Hazlett, George C.....	Silver Lake.....	do.....	138	720	140,000	.....	140,000
7. Petersburg, Town of.....	Crystal Lake.....	do.....	201	1,000	130,000	\$75,000	205,000
8. Alaska Development & Mineral Co.....	Tyee and Aanan Creeks and White River.....	do.....	157	18,200	2,360,000	.....	2,360,000
9. Illinois, State of.....	Illinois River.....	Illinois.....	48	41,450	9,500,000	.....	9,500,000
10. Oklawaha Reclamation Farms.....	Oklawaha River.....	Florida.....	177	5,500	450,000	.....	450,000
11. Ballaine, Frank L.....	Kenai River.....	Alaska.....	119	5,500	1,177,800	.....	1,177,800
12. Boise, City of.....	North and South Forks Payette River.....	Idaho.....	159	11,960	1,250,000	3,000,000	4,250,000
13. Hughes, J. H.....	French Creek.....	California.....	261	2,160	500,000	.....	500,000
14. Okaloosa, City of.....	Des Moines River.....	Iowa.....	268	2,400	400,000	Municipal.....	400,000
15. Galvin, J. G.....	Aarons Creek.....	Alaska.....	257	9,800	1,000,000	.....	1,000,000
16. Wrangell, City of.....	Mill Creek.....	do.....	269	20,500	1,100,000	100,000	1,200,000
17. Hutton, McNear & Dougherty.....	Cascade Creek.....	do.....	275	23,700	1,800,000	.....	1,800,000
18. Northern States Power Co.....	Mississippi River.....	Minnesota.....	250	10,300	3,000,000	3,000,000	6,000,000
19. Hardaway, Benj. H.....	Chipola River.....	Florida.....	303	1,760	900,000	.....	900,000
20. Mays & Gandy.....	Huntington Creek.....	Utah.....	290	850	180,000	.....	180,000
21. Willow Creek Mines.....	Craigie Creek.....	Alaska.....	297	250	75,000	.....	75,000
22. Sawtooth Power Co.....	Kruzeamepa River.....	do.....	218	33,120	4,000,000	900,000	4,900,000
23. St. Cloud Public Service Co.....	Mississippi River.....	Minnesota.....	285	4,600	900,000	.....	900,000
24. Illinois, State of.....	Fox River.....	Illinois.....	287	1,400	900,000	.....	900,000
Total.....				182,840	37,488,000	7,075,000	44,563,000

<sup>1</sup> Value of project works is estimated from somewhat limited information.

NOTE.—Five projects are State or municipal, 2 are industrial, 5 are public utilities in States without regulation, and 12 are in Alaska. Four of the latter are public utilities.

**Withdrawals.**

In accordance with provisions of the act, the General Land Office was requested, during the year, to withdraw from entry public lands affected by 59 proposed projects, for which applications had been received. Withdrawals in 40 cases had not been made at the close of the year. In practically every case the failure to request the withdrawal was due to the lack of sufficient information to identify the lands affected. The following table gives more detailed information in regard to withdrawals:

TABLE NO. 9.—*Lands withdrawn under section 24 of the act in connection with applications for permits and licenses up to July, 1922.*

State.	Withdrawals, fiscal year 1922.	Total to July 1, 1922.	Pending July 1, 1922.	Area withdrawn.		Prior status of withdrawn lands.			
				Fiscal year 1922.	Total to July 1, 1922.	Power reserve.	National forest.	Indian reservation.	Unreserved public.
				<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Alabama.....	1	2	1	137	439	0	0	0	257
Alaska.....	8	30	2	20,105	57,757	1,110	46,413	0	11,344
Arizona.....	3	6	8	162,158	204,780	37,319	6,779	33,690	59,238
Arkansas.....	1	2	2	11,098	15,558	11,033	10,450	0	4,375
California.....	25	76	11	201,147	504,328	26,765	413,331	16,872	36,517
Colorado.....	3	6	1	13,200	19,704	360	6,096	0	1,271
Florida.....	0	1	0	0	496	0	0	0	40
Idaho.....	2	11	4	300	7,546	5,220	1,547	35	524
Montana.....	6	14	1	1,985	45,137	29,168	2,017	18,827	6,414
Nevada.....	1	2	0	247,477	247,529	2,756	52	0	119,099
New Mexico.....	0	0	1	0	0	0	0	0	0
Oregon.....	6	10	3	2,560	22,862	13,612	2,520	6,828	5,357
South Dakota.....	0	1	0	0	12	0	0	0	0
Utah.....	1	6	1	1,019	30,673	12,097	3,280	1,919	5,108
Washington.....	2	8	4	13,778	21,971	1,074	20,257	0	254
Wisconsin.....	0	1	0	0	870	0	40	790	40
Wyoming.....	0	4	1	282	45,064	4,127	360	0	826
Total.....	59	180	40	675,126	1,227,716	144,641	513,154	78,651	250,664

**Restorations to Entry.**

The act provides that lands of the United States which have been reserved for power purposes may be opened to location, entry, or selection if the commission determines that the value of the lands for power purposes will not be injured or destroyed thereby, subject to a reservation of the right of the United States or its licensees, to use the lands for power purposes, without compensation other than for crops and improvements on the land. During the fiscal year the commission received 149 applications for restoration to entry of lands in power-site reserves and acted on 163 applications. Forty applications were awaiting action at the end of the period. Many of the cases were acted upon from data available in the records of the Interior Department. Six applications were investigated in the field by engineers on the staff of the commission and nine cases were referred to the Geological Survey for field report. Reports were received from the Geological Survey on 24 cases referred to it during and before the fiscal year 1922. One case was awaiting report at the end of the period.

**Special Investigations.**

The report of the Deschutes River Board, discussed in the first annual report, was completed, was approved by the commission as setting forth its policy in regard to the development of the water resources of this river, and was printed for distribution to interested parties.

Arrangements were made with the three departments to have three officials—Col. J. B. Cavanaugh, Corps of Engineers; Mr. D. C. Henny, Reclamation Service; and Mr. F. F. Henshaw, Geological Survey—who comprised the Deschutes River Board, appointed on a board to undertake a similar study of the upper Columbia River from the mouth of Snake River to Flathead Lake. The States of Washington, Idaho, and Montana, at the request of the commission, appointed representatives on this board, as follows: Mr. Marvin Chase, supervisor of hydraulics, Washington; Mr. W. G. Swendsen, State commissioner of reclamation of Idaho; and Mr. C. S. Heidel, State engineer of Montana. The Chief of Engineers directed his district engineer at Seattle, Wash., Col. Edward H. Schulz, to render all possible assistance to the board and to use his technical and clerical force for this purpose. Colonel Cavanaugh was made chairman of the board.

The board was instructed to make a study of the upper Columbia River and to submit a report recommending a scheme for developing this section of the river which should be best adapted to the fullest practicable utilization of the water for power, irrigation, navigation, and other beneficial uses. Pursuant to these instructions the board made an inspection of all important power sites along the river, of the lands included in the proposed Columbia Basin project of the State of Washington, and of the sites for its proposed works. Hearings were held at Kalispell and Polson, Mont., and at Spokane, Wash. At the close of the fiscal year studies of the board had been finished and the compilation of the report was nearing completion. When submitted this report should have great value as a source of information for those seeking to bring about the development of projects on this important river, and as a guide for administrative bodies in passing upon questions relating to specific projects for developing sections of the river.

The Colorado River has also been studied by the commission. Extensive field investigations of reservoir and dam sites, topography, and stream flow have been made by the United States Reclamation Service, the Geological Survey, and by a few private interests, so that much information was available from which to make a study of the questions involved in its development. This study was undertaken by Colonel Kelly, chief engineer of the commission, who visited the important sites on the lower river—Glen Canyon, Diamond Creek, Boulder Canyon, and Black Canyon. A report en-

titled "Best Scheme of Development of Colorado River Below Its Junction with the Green" was prepared by him for the use of the commission in dealing with the questions which will arise in handling the numerous applications for preliminary permits and licenses for proposed power projects on this stream. The report appears in the minutes of the commission for July 26, 1922, at page 177.

#### **Declarations of Intention.**

The commission received during the fiscal year 24 declarations of intention requesting that the commission find whether or not the proposed power projects come within its jurisdiction by reason of their effect on the interests of navigation. These declarations were all referred to the Chief of Engineers for investigation. Reports were received, and the commission reached a finding in 24 cases, two of which were pending from the previous year. Action on 2 cases was pending at the close of the period. In 9 cases the commission found that it had jurisdiction and in 15 cases it found that it was without jurisdiction. Further details in regard to action taken on the declarations of intention may be found in the minutes of the meetings of the commission in Appendix B.

On account of their bearing as precedents for future action of the commission, special attention is directed to three cases involving the Saco, Connecticut, and Menominee Rivers, respectively. The first is an interstate stream running from New Hampshire into Maine, the second forms part of the boundary between New Hampshire and Vermont, and the third is a part of the boundary between Wisconsin and Michigan.

With respect to the Saco River, it was reported to the commission that the river is an interstate stream flowing from New Hampshire into Maine and thence into tidewater at Saco and Biddeford. Above these two cities the river is incapable of carrying boat navigation. It is and has been used to a considerable degree, however, for the floating of lumber and logs, particularly pulpwood, to the sawmills and pulp mills along the river. A part of this traffic originates in New Hampshire and ends in Maine. The stream, therefore, is used to a certain degree "for the transportation of \* \* \* property in interstate \* \* \* commerce," and could be construed, technically, as "navigable waters" within the definition of the Federal water power act.

The stream is extensively used for power development and is obstructed by many power dams. Such obstructions, however, do not interfere with the floating of logs, for which character of navigation alone the river is suitable. Under the laws of the State of Maine the right of all persons to make use of the river for floating

logs is amply protected, and it is unnecessary for the Federal Government through any of its agencies to intervene to protect this right. It is therefore believed that the interests of interstate or foreign commerce would not be affected by the construction of the proposed dam and that the interstate transportation of property upon the stream is not sufficient in amount or in character to justify a finding by the commission that the Saco River at the point of the proposed development is "navigable waters" of the United States as defined in the Federal water power act and therefore within the jurisdiction of the commission. In view of the report the commission found that the interests of interstate or foreign commerce would not be affected by the proposed construction.

With respect to the Connecticut River it was reported to the commission that the river is an interstate stream rising in the Connecticut lakes in northern New Hampshire and flowing southward between New Hampshire and Vermont and across Massachusetts and Connecticut into Long Island Sound. The river has been improved for navigation from its mouth to Holyoke, Mass. There are existing on the river 14 dams used for power development, only the lower of which has facilities at present for passing navigation. Above Holyoke there is some small-boat navigation in the pools created by these dams, but no through navigation. The only commerce on the Connecticut River above Holyoke at the present time consists of floating of logs and pulp wood. This commerce of logs and pulp wood is interstate in its nature, and will probably continue on the headwaters of the Connecticut River past the site of the proposed project of the Grafton-Caledonia Power Co. for at least 15 or 20 years more. The stream, therefore, is used to a certain degree "for the transportation \* \* \* of property in interstate \* \* \* commerce," and could be construed technically as "navigable waters" within the definition of the Federal water power act. This portion of the stream is already used extensively for power development, but such power developments do not interfere with the floating of logs, for which character of navigation alone the river is suitable. The right to use the river for floating of logs is protected under the State law, and it is unnecessary for the Federal Government or any of its agencies to intervene to protect this right.

It is, therefore, believed that the interests of interstate or foreign commerce would not be affected by the construction of the proposed dam and that the interstate transportation of property upon the stream is not sufficient in amount or in character to justify a finding by the commission that the Connecticut River at the point of the proposed development is "navigable waters" of the United States, as defined in the Federal water power act. In view of this report

the commission found that the interests of interstate or foreign commerce would not be affected by the proposed construction.

With respect to the Menominee River, it was reported to the commission that the river is an interstate stream forming a part of the boundary between the States of Michigan and Wisconsin. Only the lower 2 miles of the river is used for commercial navigation. Above this point the river could be used for rafting or logging purposes, but is in fact employed only to a very limited extent for such purposes. Above the navigable section the river is crossed by several dams. There is no boat navigation on this section and none could be had up or down the river and there is no probability that such navigation will develop in the future. Moreover, there is no such navigation across the river between Michigan and Wisconsin and no probability that it will develop in the future to a degree which would require the supervision or protection of the United States.

While on account of its interstate character the stream might be technically construed as "suitable for use in the transportation of persons or property in interstate commerce" and therefore within the definition of "navigable waters" as contained in the Federal water power act, it is not believed that the probability of future commerce is such, either in amount or in character, as to justify any exercise of jurisdiction over the stream by the Federal Power Commission or a finding that the section of stream involved is "navigable waters" as defined in the Federal water power act. It is further believed that the interests of interstate or foreign commerce would not be affected by the proposed projects. In view of the report the commission found that the interests of interstate or foreign commerce would not be affected by the proposed project.

#### ACCOUNTING DIVISION.

In the first annual report (pp. 36-39) reference was made to a tentative draft of proposed accounting rules and regulations for the use of licensees under the act, and it was stated that many of the suggestions which had been offered for changes therein would probably be accepted and that the tentative draft could be revised and accounting rules and regulations approved and promulgated shortly after the close of that fiscal year. The expected result has, however, not been possible of attainment, due largely to controversy over the questions of accounting for depreciation on project property and the authority and duties of the commission in matters of accounting in general. These questions, which were under investigation and consideration by the commission beginning with its organization, were not finally disposed of until July 26, 1922, when formal decisions on "Depreciation" and on "Accounts and reports" were



issued, following several conferences and hearings and the submission of opinions by the chief counsel on the legal questions involved.

As soon as practicable after the decisions of July 26, 1922, were issued a final conference of interested parties was called to consider the proposed accounting system for the use of licensees. There were in attendance representatives of the State commissions and the Interstate Commerce Commission, of certain large power companies which are licensees, of the National Electric Light Association, and others. The conference lasted for more than a week, during which time a number of questions relating to accounting, some of which were quite involved, were considered in detail, and an agreement reached which it is hoped will result finally in substantial uniformity in the accounting rules to be prescribed by this commission and those prescribed by the State regulatory bodies, applicable to electric light and power companies.

During the year the chief accountant attended and participated in several conferences on accounting at which representatives of State regulatory bodies, licensees, and others were present, and the accounting division continued to collect and assemble data and suggestions relating to accounting matters to be considered in the preparation of a system of accounts for licensees. A considerable portion of the time of the employees in the accounting division has been devoted to work in connection with investigations and other matters relating to the determination of the "fair value" of certain projects already constructed which have been licensed under section 23 of the act. There will probably be much work of this nature in the future, and it is doubtful if it can be done thoroughly and properly with the present accounting force, which has not changed since last year and which consists of a chief accountant, assistant, and clerk-stenographer.

#### LEGAL DIVISION.

The legal division during the year has had a number of important questions under consideration. These have involved the authority of the commission in its jurisdiction over various streams and public lands withdrawn for power sites; in the valuation of licensed projects; and in prescribing regulations with regard to depreciation reserves, and a system of accounting to be set up and maintained by licensees. Besides opinions which have been approved by the commission, briefs have been prepared in connection with questions submitted to the Attorney General and in connection with court proceedings and threatened litigation.

The constitutional authority of Congress to vest the commission with the powers conferred by the Federal water power act has been challenged by the State of New York in an original suit filed in the

Supreme Court. The legal propositions involved have been thoroughly studied in this division and memoranda prepared for use in the case.

In the examination of applications for preliminary permits or licenses with reference to legal requirements, important questions have arisen as to the powers of municipalities to make power developments at a distance from their boundaries and sometimes in other States; as to the rights and claims of applicants and protestants to the use of waters for power development, especially in the western States; and, in general, as to compliance by the applicant with the requirements of State laws as specified in section 9 of the act. These questions have been determined in each case upon the advice of the legal division. This has occasioned much routine work.

In only one instance has any of the legal questions involved in the commission's work been brought before the courts. In condemnation proceedings before the United States District Court for Alabama, in which the Alabama Power Co. sought under license from the commission to develop power in Coosa River, the constitutionality of the act was challenged. Judge Henry D. Clayton, in an opinion not yet published, held the act to be constitutional and the condemnation proceedings to be fully authorized.

#### OPERATIONS DIVISION.

The force employed during the fiscal year in the operations division has consisted of the chief clerk, a librarian, a file clerk, a mail clerk, a clerk-stenographer, and two messenger boys.

The equipment of the commission's offices as now constituted was completed by the purchase of a small amount of furniture and furnishings, and a stack of steel shelving was installed in the library, at a total cost of \$1,551.78. The nonexpendable property of the commission, the larger portion of which has been purchased from the surplus stock of the General Supply Committee, now amounts to \$11,785.44.

One hundred and fifty-six authorizations for publication of advertisements in connection with applications for permit or license were issued during the year, involving an expense of slightly over \$2,200. On account of the requirement of section 4 (e) of the Federal water power act that publication of each advertisement be made once each week for eight successive calendar weeks, without break in sequence, and the necessity that publishers furnish complete proof of publication before settlement can be made of advertising accounts, it has been necessary to conduct considerable follow-up correspondence, and in several instances, where, through oversight, the sequence has been broken, to issue reauthorizations to publish. With but one or

two exceptions, however, evidence has been supplied for the commission's files that those portions of the act relating to advertising have been carried into effect in the projects advertised to June 15, 1922.

Since July 1, 1921, additions of nearly 800 volumes and pamphlets have been made to the library, the greater part consisting of State reports related to the work of the commission. The close proximity to the library of the Geological Survey has been of great assistance in meeting the commission's needs when on occasion its very limited reference collection has proved to be inadequate. There has been a marked increase in the use of the library by the commission's personnel, and some calls from outside have been received. These latter requests have been filled principally by furnishing bibliographies of material on the shelves on irrigation laws and on water power laws, developments, and reports. The recataloguing of the books, commenced two years ago in accordance with the Library of Congress classification, is progressing and will probably be completed within the next few months.

Routine matters connected with publication and distribution of the commission's first annual report, and its rules and regulations governing the administration of the Federal water power act, first revised issue, have been handled in this division, as well as the work of editing and publishing the "Report to the Commission on the Uses of Deschutes River, Oregon." The distribution of this publication is now being made. The regular memorandum to the press and to other agencies interested in water-power development and progress has been made up and issued, generally at weekly intervals, and it has received considerable publicity in the newspapers published in the sections where developments are being undertaken.

Copies, certified or otherwise, of the commission's records have been furnished in response to numerous requests, and \$66.72 has been deposited in the Treasury to the credit of miscellaneous receipts as fees from this source. On account of the depletion of the commission's appropriations involved, it has been found advisable to have the requisite blue-print or photostat copies made by local firms and furnished at the applicants' expense.

The commission's files have undergone considerable expansion on account of the numerous applications for permit or license which have been presented during the year, and the correspondence made necessary by the commission's general operations. The records are filed according to the subject-classification system, and the work has not been allowed to fall into arrears at any time.

The commission's expenditures during the fiscal year 1921, and during the fiscal year 1922 so far as now ascertained, have been as follows:

	Fiscal year 1921.	Fiscal year 1922.
Advertising.....	\$3,216.26	\$2,154.20
Furniture and equipment.....	10,207.42	1,551.78
Reproduction work (photostat, photograph, etc.).....	859.70	1,033.37
Stationery.....	1,737.49	649.81
Telephone, telegraph, express, and press-clipping service.....	400.99	512.72
Salaries.....	5,000.00	5,000.00
Printing and binding.....	1,944.38	4,128.70
Travel expense and per diem.....	765.79	4,455.98
Expense of cooperative field investigations.....	3,997.09	125,390.34
Stenographic transcripts of hearings.....	821.48	1,045.49
Miscellaneous.....	421.14	332.34
Books and periodicals.....		492.47
Total.....	29,371.74	46,747.18

<sup>1</sup> \$15,300 of this amount was transferred to the three departments, but it is understood that nearly half was not obligated by them and will revert to the Treasury.

##### 5. TERMS OF PERMITS AND LICENSES, AND MONEYS RECEIVED.

By subsection (c) of section 4 of the act the commission is required to "submit to Congress for the fiscal year preceding a classified report showing the permits and licenses issued under this act, and in each case the parties thereto, the terms prescribed, and the moneys received, if any, on account thereof."

This statement appears as Appendix F to this report. Only the special provisions of the permits and licenses issued during the year have been enumerated, inasmuch as the standard clauses, which are made a part of all permits or licenses, were set forth in the five standard forms published in the first annual report.

Section 8 of regulation 14, "Annual charges," provides that "the payment by the licensee of annual charges for any calendar year shall be made to the United States at the end of the year or within 30 days thereafter upon bills rendered or approved by the commission."

Since no permits or licenses were issued during the calendar year 1920, no moneys were received from permittees or licensees during the fiscal year ended June 30, 1921.

The charges which became payable December 31, 1921, amounted to \$8,963.57. It is estimated that the charges due and payable December 31, 1922, will total \$28,921.70, and on December 31, 1923, will amount to \$60,000. As these receipts will progressively increase from year to year, it is expected that the amount collected for purposes of reimbursing costs of administration of the act—25 cents per horsepower of primary power per annum—will amply serve for such purposes, and that the act may be adequately administered without any direct charge on the Federal Treasury.

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## **PART II**

### **APPENDICES**

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## PART II.

### APPENDIX A.

#### THE FEDERAL WATER POWER ACT.

(Approved, June 10, 1920; vol. 41, Statutes at Large, p. 1063.)

(Public—No. 280—66th Cong. H. R. 3184.)

**AN ACT** To create a Federal Power Commission; to provide for the improvement of navigation; the development of water power; the use of the public lands in relation thereto, and to repeal section 18 of the River and Harbor Appropriation Act, approved August 8, 1917, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That a commission is hereby created and established, to be known as the Federal Power Commission (hereinafter referred to as the commission), which shall be composed of the Secretary of War, the Secretary of the Interior, and the Secretary of Agriculture. Two members of the commission shall constitute a quorum for the transaction of business, and the commission shall have an official seal, which shall be judicially noticed. The President shall designate the chairman of the commission.

SEC. 2. That the commission shall appoint an executive secretary, who shall receive a salary of \$5,000 a year, and prescribe his duties, and the commission may request the President of the United States to detail an officer from the United States Engineer Corps to serve the commission as engineer officer, his duties to be prescribed by the commission.

The work of the commission shall be performed by and through the Departments of War, Interior, and Agriculture and their engineering, technical, clerical, and other personnel except as may be otherwise provided by law.

All the expenses of the commission, including rent in the District of Columbia, all necessary expenses for transportation and subsistence, including, in the discretion of the commission, a per diem of not exceeding \$4 in lieu of subsistence incurred by its employees under its orders in making any investigation or conducting field work, or upon official business outside of the District of Columbia and away from their designated points of duty, shall be allowed and paid on the presentation of itemized vouchers therefor approved by a member or officer of the commission duly authorized for that purpose; and in order to defray the expenses made necessary by the provisions of this act there is hereby authorized to be appropriated such sums as Congress may hereafter determine, and the sum of \$100,000 is hereby appropriated, out of any moneys in the Treasury not otherwise appropriated, available until expended, to be paid out upon warrants drawn on the Secretary of the Treasury upon order of the commission.

SEC. 3. That the words defined in this section shall have the following meanings for the purposes of this act, to wit:

"Public lands" means such lands and interest in lands owned by the United States as are subject to private appropriation and disposal under public land laws. It shall not include "reservations," as hereinafter defined.

"Reservations" means national monuments, national parks, national forests, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws; also lands and interests in lands acquired and held for any public purpose.

"Corporation" means a corporation organized under the laws of any State or of the United States empowered to develop, transmit, distribute, sell, lease, or utilize power in addition to such other powers as it may possess, and authorized to transact in the State or States in which its project is located all business necessary to effect the purposes of a license under this act. It shall not include "municipalities" as hereinafter defined.

"State" means a State admitted to the Union, the District of Columbia, and any organized Territory of the United States.

"Municipality" means a city, county, irrigation district, drainage district, or other political subdivision or agency of a State competent under the laws thereof to carry on the business of developing, transmitting, utilizing, or distributing power.

"Navigable waters" means those parts of streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, and which either in their natural or improved condition, notwithstanding interruptions between the navigable parts of such streams or waters by falls, shallows, or rapids compelling land carriage, are used or suitable for use for the transportation of persons or property in interstate or foreign commerce, including therein all such interrupting falls, shallows, or rapids, together with such other parts of streams as shall have been authorized by Congress for improvement by the United States or shall have been recommended to Congress for such improvement after investigation under its authority.

"Municipal purposes" means and includes all purposes within municipal powers as defined by the constitution or laws of the State or by the charter of the municipality.

"Government dam" means a dam or other work constructed or owned by the United States for Government purposes with or without contribution from others.

"Project" means complete unit of improvement or development, consisting of a power house, all water conduits, all dams and appurtenant works and structures (including navigation structures) which are a part of said unit, and all storage, diverting, or forebay reservoirs directly connected therewith, the primary line or lines transmitting power therefrom to the point of junction with the distribution system or with the interconnected primary transmission system, all miscellaneous structures used and useful in connection with said unit or any part thereof, and all water rights, rights of way, ditches, dams, reservoirs, lands, or interest in lands the use and occupancy of which are necessary or appropriate in the maintenance and operation of such unit.

"Project works" means the physical structures of a project.

"Net investment" in a project means the actual legitimate original cost thereof as defined and interpreted in the "classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission," plus similar costs of additions thereto and betterments thereof, minus the sum of the following items properly allocated thereto, if and to the extent that such items have been accumulated during the period of the license from earnings in excess of a fair return on such investment: (a) Unappropriated



surplus, (b) aggregate credit balances of current depreciation accounts, and (c) aggregate appropriations of surplus or income held in amortization, sinking fund, or similar reserves, or expended for additions or betterments or used for the purposes for which such reserves were created. The term "cost" shall include, in so far as applicable, the elements thereof prescribed in said classification, but shall not include expenditures from funds obtained through donations by States, municipalities, individuals, or others, and said classification of investment of the Interstate Commerce Commission shall in so far as applicable be published and promulgated as a part of the rules and regulations of the commission.

SEC. 4. That the commission is hereby authorized and empowered—

(a) To make investigations and to collect and record data concerning the utilization of the water resources of any region to be developed, the water power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development costs, and relation to markets of power sites, and whether the power from Government dams can be advantageously used by the United States for its public purposes, and what is a fair value of such power, to the extent the commission may deem necessary or useful for the purposes of this act.

In order to aid the commission in determining the net investment of a licensee in any project, the licensee shall, upon oath, within a reasonable period of time, to be fixed by the commission, after the construction of the original project or any addition thereto or betterment thereof, file with the commission, in such detail as the commission may require, a statement in duplicate showing the actual legitimate cost of construction of such project, addition, or betterment, and the price paid for water rights, rights of way, lands, or interest in lands. The commission shall deposit one of said statements with the Secretary of the Treasury. The licensee shall grant to the commission or to its duly authorized agent or agents, at all reasonable times, free access to such project, addition, or betterment, and to all maps, profiles, contracts, reports of engineers, accounts, books, records, and all other papers and documents relating thereto.

(b) To cooperate with the executive departments and other agencies of State or National Governments in such investigations; and for such purpose the several departments and agencies of the National Government are authorized and directed upon the request of the commission to furnish such records, papers, and information in their possession as may be requested by the commission, and temporarily to detail to the commission such officers or experts as may be necessary in such investigations.

(c) To make public from time to time the information secured hereunder, and to provide for the publication of its reports and investigations in such form and manner as may be best adapted for public information and use. The commission, on or before the first Monday in December of each year, shall submit to Congress for the fiscal year preceding a classified report showing the permits and licenses issued under this act, and in each case the parties thereto, the terms prescribed, and the moneys received, if any, on account thereof.

(d) To issue licenses to citizens of the United States, or to any association of such citizens, or to any corporation organized under the laws of the United States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation, and for the development, transmission, and utilization of power across, along, from or in

any of the navigable waters of the United States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam, except as herein provided: *Provided*, That licenses shall be issued within any reservation only after a finding by the commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation: *Provided further*, That no license affecting the navigable capacity of any navigable waters of the United States shall be issued until the plans of the dam or other structures affecting navigation have been approved by the Chief of Engineers and the Secretary of War. Whenever the contemplated improvement is, in the judgment of the commission, desirable and justified in the public interest for the purpose of improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, a finding to that effect shall be made by the commission and shall become a part of the records of the commission: *Provided further*, That in case the commission shall find that any Government dam may be advantageously used by the United States for public purposes in addition to navigation, no license therefor shall be issued until two years after it shall have reported to Congress the facts and conditions relating thereto, except that this provision shall not apply to any Government dam constructed prior to the passage of this act: *And provided further*, That upon the filing of any application for a license which has not been preceded by a preliminary permit under subsection (e) of this section, notice shall be given and published as required by the proviso of said subsection.

(e) To issue preliminary permits for the purpose of enabling applicants for a license hereunder to secure the data and to perform the acts required by section 9 hereof: *Provided, however*, That upon the filing of any application for a preliminary permit by any person, association, or corporation the commission, before granting such application, shall at once give notice of such application in writing to any State or municipality likely to be interested in or affected by such application; and shall also publish notice of such application for eight weeks in a daily or weekly newspaper published in the county or counties in which the project or any part thereof or the lands affected thereby are situated.

(f) To prescribe rules and regulations for the establishment of a system of accounts and for the maintenance thereof by licensees hereunder; to examine all books and accounts of such licensees at any time; to require them to submit at such time or times as the commission may require statements and reports, including full information as to assets and liabilities, capitalization, net investment and reduction thereof, gross receipts, interest due and paid, depreciation and other reserves, cost of project, cost of maintenance and operation of the project, cost of renewals and replacements of the project works, and as to depreciation of the project works and as to production, transmission, use, and sale of power; also to require any licensee to make adequate provision for currently determining said costs and other facts. All such statements and reports shall be made upon oath, unless otherwise specified, and in such form and on such blanks as the commission may require. Any person who, for the purpose of deceiving, makes or causes to be made any false entry in the books or the accounts of such licensee, and any person who, for the purpose of deceiving, makes or causes to be made any false statement or report in response

to a request or order or direction from the commission for the statements and report herein referred to shall, upon conviction, be fined not more than \$2,000 or imprisoned not more than five years, or both.

(g) To hold hearings and to order testimony to be taken by deposition at any designated place in connection with the application for any permit or license, or the regulation of rates, service, or securities, or the making of any investigation, as provided in this act; and to require by subpoena, signed by any member of the commission, the attendance and testimony of witnesses and the production of documentary evidence from any place in the United States, and in case of disobedience to a subpoena the commission may invoke the aid of any court of the United States in requiring the attendance and testimony of witnesses and the production of documentary evidence. Any member, expert, or examiner of the commission may, when duly designated by the commission for such purposes, administer oaths and affirmations, examine witnesses, and receive evidence. Depositions may be taken before any person designated by the commission or by its executive secretary and empowered to administer oaths, shall be reduced to writing by such person or under his direction, and subscribed by the deponent. Witnesses summoned before the commission shall be paid the same fees and mileage that are paid witnesses in the courts of the United States, and witnesses whose depositions are taken and persons taking the same shall severally be entitled to the same fees as are paid for like services in the courts of the United States.

(h) To perform any and all acts, to make such rules and regulations, and to issue such orders not inconsistent with this act as may be necessary and proper for the purpose of carrying out the provisions of this act.

SEC. 5. That each preliminary permit issued under this act shall be for the sole purpose of maintaining priority of application for a license under the terms of this act for such period or periods, not exceeding a total of three years, as in the discretion of the commission may be necessary for making examinations and surveys, for preparing maps, plans, specifications, and estimates, and for making financial arrangements. Each such permit shall set forth the conditions under which priority shall be maintained and a license issued. Such permits shall not be transferable, and may be canceled by order of the commission upon failure of permittees to comply with the conditions thereof.

SEC. 6. That licenses under this act shall be issued for a period not exceeding fifty years. Each such license shall be conditioned upon acceptance by the licensee of all the terms and conditions of this act and such further conditions, if any, as the commission shall prescribe in conformity with this act, which said terms and conditions and the acceptance thereof shall be expressed in said license. Licenses may be revoked only for the reasons and in the manner prescribed under the provisions of this act, and may be altered or surrendered only upon mutual agreement between the licensee and the commission after ninety days' public notice.

SEC. 7. That in issuing preliminary permits hereunder or licenses where no preliminary permit has been issued and in issuing licenses to new licensees under section 15 hereof the commission shall give preference to applications therefor by States and municipalities, provided the plans for the same are deemed by the commission equally well adapted, or shall within a reasonable time to be fixed by the commission be made equally well adapted, to conserve and utilize in the public interest the navigation and water resources of the region; and as between other applicants, the commission may give preference to the applicant the plans of which it finds and determines are best adapted

to develop, conserve, and utilize in the public interest the navigation and water resources of the region, if it be satisfied as to the ability of the applicant to carry out such plans.

That whenever, in the judgment of the commission, the development of any project should be undertaken by the United States itself, the commission shall not approve any application for such project by any citizen, association, corporation, State, or municipality, but shall cause to be made such examinations, surveys, reports, plans, and estimates of the cost of the project as it may deem necessary, and shall submit its findings to Congress with such recommendations as it may deem appropriate concerning the construction of such project or completion of any project upon any Government dam by the United States.

The commission is hereby authorized and directed to investigate and, on or before the 1st day of January, 1921, report to Congress the cost and, in detail the economic value of the power plant outlined in project numbered 3, House Document Numbered 1400, Sixty-second Congress, third session, in view of existing conditions, utilizing such study as may heretofore have been made by any department of the Government; also in connection with such project to submit plans and estimates of cost necessary to secure an increased and adequate water supply for the District of Columbia. For this purpose the sum of \$25,000, or so much thereof as may be necessary, is hereby appropriated.

SEC. 8. That no voluntary transfer of any license, or of the rights thereunder granted, shall be made without the written approval of the commission; and any successor or assign of the rights of such licensee, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the license under which such rights are held by such licensee and also subject to all the provisions and conditions of this act to the same extent as though such successor or assign were the original licensee hereunder: *Provided*, That a mortgage or trust deed or judicial sales made thereunder or under tax sales shall not be deemed voluntary transfers within the meaning of this section.

SEC. 9. That each applicant for a license hereunder shall submit to the commission—

(a) Such maps, plans, specifications, and estimates of cost as may be required for a full understanding of the proposed project. Such maps, plans, and specifications when approved by the commission shall be made a part of the license; and thereafter no change shall be made in said maps, plans, or specifications until such changes shall have been approved and made a part of such license by the commission.

(b) Satisfactory evidence that the applicant has complied with the requirements of the laws of the State or States within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting, and distributing power, and in any other business necessary to effect the purposes of a license under this act.

(c) Such additional information as the commission may require.

SEC. 10. That all licenses issued under this act shall be on the following conditions:

(a) That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the commission will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses; and

if necessary in order to secure such scheme the commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval.

(b) That except when emergency shall require for the protection of navigation, life, health, or property, no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works constructed hereunder of a capacity in excess of one hundred horsepower without the prior approval of the commission; and any emergency alteration or addition so made shall thereafter be subject to such modification and change as the commission may direct.

(c) That the licensee shall maintain the project works in a condition of repair adequate for the purposes of navigation and for the efficient operation of said works in the development and transmission of power, shall make all necessary renewals and replacements, shall establish and maintain adequate depreciation reserves for such purposes, shall so maintain and operate said works as not to impair navigation, and shall conform to such rules and regulations as the commission may from time to time prescribe for the protection of life, health, and property. Each licensee hereunder shall be liable for all damages occasioned to the property of others by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto, constructed under the license, and in no event shall the United States be liable therefor.

(d) That after the first twenty years of operation out of surplus earned thereafter, if any, accumulated in excess of a specified reasonable rate of return upon the actual, legitimate investment of a licensee in any project or projects under license the licensee shall establish and maintain amortization reserves, which reserves shall, in the discretion of the commission, be held until the termination of the license or be applied from time to time in reduction of the net investment. Such specified rate of return and the proportion of such surplus earnings to be paid into and held in such reserves shall be set forth in the license.

(e) That the licensee shall pay to the United States reasonable annual charges in an amount to be fixed by the commission for the purpose of reimbursing the United States for the costs of the administration of this act; for recompensing it for the use, occupancy, and enjoyment of its lands or other property; and for the expropriation to the Government of excessive profits until the respective States shall make provision for preventing excessive profits or for the expropriation thereof to themselves, or until the period of amortization as herein provided is reached, and in fixing such charges the commission shall seek to avoid increasing the price to the consumers of power by such charges, and charges for the expropriation of excessive profits may be adjusted from time to time by the commission as conditions may require: *Provided*, That when licenses are issued involving the use of Government dams or other structures owned by the United States or tribal lands embraced within Indian reservations the commission shall fix a reasonable annual charge for the use thereof, and such charges may be readjusted at the end of twenty years after the beginning of operations and at periods of not less than ten years thereafter in a manner to be described in each license: *Provided*, That licenses for the development, transmission, or distribution of power by States or municipalities shall be issued and enjoyed without charge to the extent such power is sold to the public without profit or is used by such State or municipality for State or municipal purposes, except that as to projects constructed or to be constructed by States or municipalities primarily designed to provide

or improve navigation licenses therefor shall be issued without charge; and that licenses for the development, transmission, or distribution of power for domestic, mining, or other beneficial use in projects of not more than one hundred horsepower capacity may be issued without charge, except on tribal lands within Indian reservations; but in no case shall a license be issued free of charge for the development and utilization of power created by any Government dam and that the amount charged therefor in any license shall be such as determined by the commission.

(f) That whenever any licensee hereunder is directly benefited by the construction work of another licensee, a permittee, or of the United States of a storage reservoir or other headwater improvement, the commission shall require as a condition of the license that the licensee so benefited shall reimburse the owner of such reservoir or other improvements for such part of the annual charges for interest, maintenance, and depreciation thereon as the commission may deem equitable. The proportion of such charges to be paid by any licensee shall be determined by the commission.

Whenever such reservoir or other improvement is constructed by the United States the commission shall assess similar charges against any licensee directly benefited thereby, and any amount so assessed shall be paid into the Treasury of the United States, to be reserved and appropriated as a part of the special fund for headwater improvements as provided in section 17 hereof.

(g) Such further conditions not inconsistent with the provisions of this act as the commission may require.

(h) That combinations, agreements, arrangements, or understandings, express or implied, to limit the output of electrical energy, to restrain trade, or to fix, maintain, or increase prices for electrical energy or service are hereby prohibited.

(i) In issuing licenses for a minor part only of a complete project, or for a complete project of not more than one hundred horsepower capacity, the commission may in its discretion waive such conditions, provisions, and requirements of this act, except the license period of fifty years, as it may deem to be to the public interest to waive under the circumstances: *Provided*, That the provisions hereof shall not apply to lands within Indian reservations.

SEC. 11. That if the dam or other project works are to be constructed across, along, or in any of the navigable waters of the United States, the commission may, in so far as it deems the same reasonably necessary to promote the present and future needs of navigation and consistent with a reasonable investment cost to the licensee, include in the license any one or more of the following provisions or requirements:

(a) That such licensee shall, to the extent necessary to preserve and improve navigation facilities, construct, in whole or in part, without expense to the United States, in connection with such dam, a lock or locks, booms, sluices, or other structures for navigation purposes, in accordance with plans and specifications approved by the Chief of Engineers and the Secretary of War and made part of such license.

(b) That in case such structures for navigation purposes are not made a part of the original construction at the expense of the licensee, then whenever the United States shall desire to complete such navigation facilities the licensee shall convey to the United States, free of cost, such of its land and its rights of way and such right of passage through its dams or other structures, and permit such control of pools as may be required to complete such navigation facilities.

(c) That such licensee shall furnish free of cost to the United States power for the operation of such navigation facilities, whether constructed by the licensee or by the United States.

SEC. 12. That whenever application is filed for a project hereunder involving navigable waters of the United States, and the commission shall find upon investigation that the needs of navigation require the construction of a lock or locks or other navigation structures, and that such structures can not, consistent with a reasonable investment cost to the applicant, be provided in the manner specified in section 11, subsection (a) hereof, the commission may grant the application with the provision to be expressed in the license that the licensee will install the necessary navigation structures if the Government fails to make provision therefor within a time to be fixed in the license and cause a report upon such project to be prepared, with estimates of cost of the power development and of the navigation structures, and shall submit such report to Congress with such recommendations as it deems appropriate concerning the participation of the United States in the cost of construction of such navigation structures.

SEC. 13. That the licensee shall commence the construction of the project works within the time fixed in the license, which shall not be more than two years from the date thereof, shall thereafter in good faith and with due diligence prosecute such construction, and shall within the time fixed in the license complete and put into operation such part of the ultimate development as the commission shall deem necessary to supply the reasonable needs of the then available market, and shall from time to time thereafter construct such portion of the balance of such development as the commission may direct, so as to supply adequately the reasonable market demands until such development shall have been completed. The periods for the commencement of construction may be extended once but not longer than two additional years, and the period for the completion of construction carried on in good faith and with reasonable diligence may be extended by the commission when not incompatible with the public interests. In case the licensee shall not commence actual construction of the project works, or of any specified part thereof, within the time prescribed in the license or as extended by the commission, then, after due notice given, the license shall, as to such project works or part thereof, be terminated upon written order of the commission. In case the construction of the project works, or of any specified part thereof, have been begun but not completed within the time prescribed in the license, or as extended by the commission, then the Attorney General, upon the request of the commission, shall institute proceedings in equity in the district court of the United States for the district in which any part of the project is situated for the revocation of said license, the sale of the works constructed, and such other equitable relief as the case may demand, as provided for in section 26 hereof.

SEC. 14. That upon not less than two years notice in writing from the commission the United States shall have the right upon or after the expiration of any license to take over and thereafter to maintain and operate any project or projects as defined in section 3 hereof, and covered in whole or in part by the license, or the right to take over upon mutual agreement with the licensee all property owned and held by the licensee then valuable and serviceable in the development, transmission, or distribution of power and which is then dependent for its usefulness upon the continuance of the license, together with any lock or locks or other aids to navigation constructed at the expense of the licensee, upon the condition that before taking possession it shall pay the net investment of the licensee in the project or projects taken, not to exceed the fair value of the property taken, plus such reasonable damages, if any, to property of the licensee valuable, serviceable, and dependent as above set forth but not taken, as may be caused by the severance therefrom of property taken, and shall as-

sume all contracts entered into by the licensee with the approval of the commission. The net investment of the licensee in the project or projects so taken and the amount of such severance damages, if any, shall be determined by agreement between the commission and the licensee, and in case they can not agree, by proceedings in equity instituted by the United States in the district court of the United States in the district within which any such property may be located; *Provided*, That such net investment shall not include or be affected by the value of any lands, rights of way, or other property of the United States licensed by the commission under this act, by the license, or by good will, going value, or prospective revenues: *Provided further*, That the values allowed for water rights, rights of way, lands, or interest in lands shall not be in excess of the actual reasonable cost thereof at the time of acquisition by the licensee: *Provided*, That the right of the United States or any State or municipality to take over, maintain, and operate any project licensed under this act at any time by condemnation proceedings upon payment of just compensation is hereby expressly reserved.

SEC. 15. That if the United States does not, at the expiration of the original license, exercise its right to take over, maintain, and operate any project or projects of the licensee, as provided in section 14 hereof, the commission is authorized to issue a new license to the original licensee upon such terms and conditions as may be authorized or required under the then existing laws and regulations, or to issue a new license under said terms and conditions to a new licensee, which license may cover any project or projects covered by the original license, and shall be issued on the condition that the new licensee shall, before taking possession of such project or projects, pay such amount, and assume such contracts as the United States is required to do, in the manner specified in section 14 hereof: *Provided*, That in the event the United States does not exercise the right to take over or does not issue a license to a new licensee, or issue a new license to the original licensee, upon reasonable terms, then the commission shall issue from year to year an annual license to the then licensee under the terms and conditions of the original license until the property is taken over or a new license is issued as aforesaid.

SEC. 16. That when in the opinion of the President of the United States, evidenced by a written order addressed to the holder of any license hereunder, the safety of the United States demands it, the United States shall have the right to enter upon and take possession of any project, or part thereof, constructed, maintained, or operated under said license, for the purpose of manufacturing nitrates, explosives, or munitions of war, or for any other purpose involving the safety of the United States, to retain possession, management, and control thereof for such length of time as may appear to the President to be necessary to accomplish said purposes, and then to restore possession and control to the party or parties entitled thereto; and in the event that the United States shall exercise such right it shall pay to the party or parties entitled thereto just and fair compensation for the use of said property as may be fixed by the commission upon the basis of a reasonable profit in time of peace, and the cost of restoring said property to as good condition as existed at the time of the taking over thereof, less the reasonable value of any improvements that may be made thereto by the United States and which are valuable and serviceable to the licensee.

SEC. 17. That all proceeds from any Indian reservation shall be placed to the credit of the Indians of such reservation. All other charges arising from licenses hereunder shall be paid into the Treasury of the United States, subject to the following distribution: Twelve and one-half per centum thereof is hereby appropriated to be paid into the Treasury of the United States and



credited to "Miscellaneous receipts"; 50 per centum of the charges arising from licenses hereunder for the occupancy and use of public lands, national monuments, national forests, and national parks shall be paid into, reserved, and appropriated as a part of the reclamation fund created by the act of Congress known as the reclamation act, approved June 17, 1902; and 37½ per centum of the charges arising from licenses hereunder for the occupancy and use of national forests, national parks, public lands, and national monuments, from development within the boundaries of any State shall be paid by the Secretary of the Treasury to such State; and 50 per centum of the charges arising from all other licenses hereunder is hereby reserved and appropriated as a special fund in the Treasury to be expended under the direction of the Secretary of War in the maintenance and operation of dams and other navigation structures owned by the United States or in the construction, maintenance, or operation of headwater or other improvements of navigable waters of the United States.

SEC. 18. That the operation of any navigation facilities which may be constructed as a part of or in connection with any dam or diversion structure built under the provisions of this Act, whether at the expense of a licensee hereunder or of the United States, shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including the control of the level of the pool caused by such dam or diversion structure as may be made from time to time by the Secretary of War. Such rules and regulations may include the maintenance and operation by such licensee at its own expense of such lights and signals as may be directed by the Secretary of War, and such fishways as may be prescribed by the Secretary of Commerce; and for willful failure to comply with any such rule or regulation such licensee shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished as provided in section 25 hereof.

SEC. 19. That as a condition of the license, every licensee hereunder which is a public-service corporation, or a person, association, or corporation owning or operating any project and developing, transmitting, or distributing power for sale or use in public service, shall abide by such reasonable regulation of the services to be rendered to customers or consumers of power, and of rates and charges of payment therefor, as may from time to time be prescribed by any duly constituted agency of the State in which the service is rendered or the rate charged. That in case of the development, transmission, or distribution, or use in public service of power by any licensee hereunder or by its customer engaged in public service within a State which has not authorized and empowered a commission or other agency or agencies within said State to regulate and control the services to be rendered by such licensee or by its customer engaged in public service, or the rates and charges of payment therefor, or the amount or character of securities to be issued by any of said parties, it is agreed as a condition of such license that jurisdiction is hereby conferred upon the commission, upon complaint of any person aggrieved or upon its own initiative, to exercise such regulation and control until such time as the State shall have provided a commission or other authority for such regulation and control: *Provided*, That the jurisdiction of the commission shall cease and determine as to each specific matter of regulation and control prescribed in this section as soon as the State shall have provided a commission or other authority for the regulation and control of that specific matter.

SEC. 20. That when said power or any part thereof shall enter into interstate or foreign commerce the rates charged and the service rendered by any such licensee, or by any subsidiary corporation, the stock of which is owned or

controlled directly or indirectly by such licensee, or by any person, corporation, or association purchasing power from such licensee for sale and distribution or use in public service, shall be reasonable, nondiscriminatory, and just to the customer, and all unreasonable discriminatory and unjust rates or services are hereby prohibited and declared to be unlawful; and whenever any of the States directly concerned has not provided a commission or other authority to enforce the requirements of this section within such State or to regulate and control the amount and character of securities to be issued by any of such parties or such States are unable to agree through their properly constituted authorities on the services to be rendered or on the rates or charges of payment therefor, or on the amount or character of securities to be issued by any of said parties, jurisdiction is hereby conferred upon the commission, upon complaint of any person aggrieved, upon the request of any State concerned, or upon its own initiative, to enforce the provisions of this section, to regulate and control so much of the services rendered, and of the rates and charges of payment therefor as constitute interstate or foreign commerce, and to regulate the issuance of securities by the parties included within this section, and securities issued by the licensee subject to such regulations shall be allowed only for the bona fide purpose of financing and conducting the business of such licensee.

The administration of the provisions of this section, so far as applicable, shall be according to the procedure and practice in fixing and regulating the rates, charges, and practices of railroad companies as provided in the act to regulate commerce, approved February 4, 1887, as amended, and that the parties subject to such regulation shall have the same rights of hearing, defense, and review as said companies in such cases.

In any valuation of the property of any licensee hereunder for purposes of rate making, no value shall be claimed by the licensee or allowed by the commission for any project or projects under license in excess of the value or values prescribed in section 14 hereof for the purposes of purchase by the United States, but there shall be included the cost to such licensee of the construction of the lock or locks or other aids of navigation and all other capital expenditures required by the United States, and no value shall be claimed or allowed for the rights granted by the commission or by this act.

SEC. 21. That when any licensee can not acquire by contract or pledges an unimproved dam site or the right to use or damage the lands or property of others necessary to the construction, maintenance, or operation of any dam, reservoir, diversion structure, or the works appurtenant or accessory thereto, in conjunction with an improvement which in the judgment of the commission is desirable and justified in the public interest for the purpose of improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, it may acquire the same by the exercise of the right of eminent domain in the district court of the United States for the district in which such land or other property may be located, or in the State courts. The practice and procedure in any action or proceeding for that purpose in the district court of the United States shall conform as nearly as may be with the practice and procedure in similar action or proceeding in the courts of the State where the property is situated: *Provided*, That United States district courts shall only have jurisdiction of cases when the amount claimed by the owner of the property to be condemned exceeds \$3,000.

SEC. 22. That whenever the public interest requires or justifies the execution by the licensee of contracts for the sale and delivery of power for periods extending beyond the date of termination of the license, such contracts may be

entered into upon the joint approval of the commission and of the public-service commission or other similar authority in the State in which the sale or delivery of power is made, or if sold or delivered in a State which has no such public-service commission, then upon the approval of the commission, and thereafter, in the event of failure to issue a new license to the original licensee at the termination of the license, the United States or the new licensee, as the case may be, shall assume and fulfill all such contracts.

SEC. 23. That the provisions of this act shall not be construed as affecting any permit or valid existing right of way heretofore granted or as confirming or otherwise affecting any claim, or as affecting any authority heretofore given pursuant to law, but any person, association, corporation, State, or municipality, holding or possessing such permit, right of way, or authority may apply for a license hereunder, and upon such application the commission may issue to any such applicant a license in accordance with provisions of this act, and in such case the provisions of this act shall apply to such applicant as a licensee hereunder: *Provided*, That when application is made for a license under this section for a project or projects already constructed, the fair value of said project or projects, determined as provided in this section, shall for the purposes of this act and of said license be deemed to be the amount to be allowed as the net investment of the applicant in such project or projects as of the date of such license, or as of the date of such determination, if license has not been issued. Such fair value may, in the discretion of the commission, be determined by mutual agreement between the commission and the applicant or, in case they can not agree, jurisdiction is hereby conferred upon the district court of the United States in the district within which such project or projects may be located, upon the application of either party, to hear and determine the amount of such fair value.

That any person, association, corporation, State, or municipality intending to construct a dam or other project works across, along, over or in any stream or part thereof, other than those defined herein as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce between foreign nations and among the several States, may in their discretion file declaration of such intention with the commission, whereupon the commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, such person, association, corporation, State, or municipality shall not proceed with such construction until it shall have applied for and shall have received a license under the provisions of this act. If the commission shall not so find, and if no public lands or reservations are affected, permission is hereby granted to construct such dam or other project works in such stream upon compliance with State laws.

SEC. 24. That any lands of the United States included in any proposed project under the provisions of this act shall from the date of filing of application therefor be reserved from entry, location, or other disposal under the laws of the United States until otherwise directed by the commission or by Congress. Notice that such application has been made, together with the date of filing thereof and a description of the lands of the United States affected thereby, shall be filed in the local land office for the district in which such lands are located. Whenever the commission shall determine that the value of any lands of the United States so applied for, or heretofore or hereafter reserved or classified as power sites, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the public-land laws,

the Secretary of the Interior, upon notice of such determination, shall declare such lands open to location, entry, or selection, subject to and with a reservation of the right of the United States or its permittees or licensees to enter upon, occupy, and use any part or all of said lands necessary, in the judgment of the commission, for the purposes of this act, which right shall be expressly reserved in every patent issued for such lands; and no claim or right to compensation shall accrue from the occupation or use of any of said lands for said purposes. The United States or any licensee for any such lands hereunder may enter thereupon for the purposes of this act, upon payment of any damages to crops, buildings, or other improvements caused thereby to the owner thereof, or upon giving a good and sufficient bond to the United States for the use and benefit of the owner to secure the payment of such damages as may be determined and fixed in an action brought upon the bond in a court of competent jurisdiction, said bond to be in the form prescribed by the commission: *Provided*, That locations, entries, selections, or filings heretofore made for lands reserved as water-power sites or in connection with water-power development or electrical transmission may proceed to approval or patent under and subject to the limitations and conditions in this section contained.

SEC. 25. That any licensee, or any person, who shall willfully fail or who shall refuse to comply with any of the provisions of this act, or with any of the conditions made a part of any license issued hereunder, or with any subpoena of the commission, or with any regulation or lawful order of the commission, or of the Secretary of War, or of the Secretary of Commerce as to fishways, issued or made in accordance with the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall, in the discretion of the court, be punished by a fine of not exceeding \$1,000, in addition to other penalties herein prescribed or provided by law; and every month any such licensee or any such person shall remain in default after written notice from the commission, or from the Secretary of War, or from the Secretary of Commerce, shall be deemed a new and separate offense punishable as aforesaid.

SEC. 26. That the Attorney General may, on request of the commission or of the Secretary of War, institute proceedings in equity in the district court of the United States in the district in which any project or part thereof is situated for the purpose of revoking for violation of its terms any permit or license issued hereunder, or for the purpose of remedying or correcting by injunction, mandamus, or other process any act of commission or omission in violation of the provisions of this act or of any lawful regulation or order promulgated hereunder. The district courts shall have jurisdiction over all of the above-mentioned proceedings and shall have power to issue and execute all necessary process and to make and enforce all writs, orders, and decrees to compel compliance with the lawful orders and regulations of the commission and of the Secretary of War, and to compel the performance of any condition imposed under the provisions of this act. In the event a decree revoking a license is entered, the court is empowered to sell the whole or any part of the project or projects under license, to wind up the business of such licensee conducted in connection with such project or projects, to distribute the proceeds to the parties entitled to the same, and to make and enforce such further orders and decrees as equity and justice may require. At such sale or sales the vendee shall take the rights and privileges belonging to the licensee and shall perform the duties of such licensee and assume all outstanding obligations and liabilities of the licensee which the court may deem equitable in the premises; and at such sale or sales the United States may become a purchaser, but it shall not be required to pay a greater amount than it would be required to pay under the provisions of section 14 hereof at the termination of the license.

SEC. 27. That nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

SEC. 28. That the right to alter, amend, or repeal this act is hereby expressly reserved; but no such alteration, amendment, or repeal shall affect any license theretofore issued under the provisions of this act, or the rights of any licensee thereunder.

SEC. 29. That all acts or parts of acts inconsistent with this act are hereby repealed: *Provided*, That nothing herein contained shall be held or construed to modify or repeal any of the provisions of the act of Congress approved December 19, 1913, granting certain rights of way to the city and county of San Francisco, in the State of California: *Provided further*, That section 18 of an act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, approved August 8, 1917, is hereby repealed.

SEC. 30. That the short title of this act shall be "The Federal Water Power Act."

Approved, June 10, 1920.

### AMENDMENT TO THE FEDERAL WATER POWER ACT.

(41 Stat. 1353.)

AN ACT To amend an act entitled "An act to create a Federal Power Commission; to provide for the improvement of navigation; the development of water power; the use of the public lands in relation thereto; and to repeat section 18 of the river and harbor appropriation act, approved August 8, 1917, and for other purposes," approved June 10, 1920.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That hereafter no permit, license, lease, or authorization for dams, conduits, reservoirs, power houses, transmission lines, or other works for storage or carriage of water, or for the development, transmission, or utilization of power, within the limits as now constituted of any national park or national monument shall be granted or made without specific authority of Congress, and so much of the act of Congress approved June 10, 1920, entitled "An act to create a Federal Power Commission; to provide for the improvement of navigation; the development of water power; the use of the public lands in relation thereto; and to repeat section 18 of the river and harbor appropriation act, approved August 8, 1917, and for other purposes," approved June 10, 1920, as authorizes licensing such uses of existing national parks and national monuments by the Federal Power Commission is hereby repealed.

Approved, March 3, 1921.



## APPENDIX B.

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### MINUTES OF THE COMMISSION'S MEETINGS.

[July 11, 1921, to August 17, 1922, inclusive.]

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TWENTY-SECOND MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR ON  
JULY 11, 1921.

Meeting called to order at 4.15 p. m.

Present, Secretary Weeks, chairman; Secretary Fall; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, attorney; and William V. King, chief accountant. Gen. Lansing H. Beach, Chief of Engineers, was also present.

Mr. Wallace Townsend, representing the Arkansas Hydro-Electric Development Co., made request of the Commission for a reconsideration of the finding made at its meeting of February 14, 1921, and reaffirmed at its meeting of May 28, with respect to the declaration of intention of said company to construct a power project on the Little Red River in White and Cleburne Counties, Ark., on which dates the Commission had found that the proposed project would affect the interests of interstate and foreign commerce. Mr. Townsend submitted arguments and data in support of the request and affidavits concerning the nonnavigability of the stream. He was assisted in the presentation of his case by Hon. J. S. Utley, attorney general of Arkansas. On behalf of said company it was contended that the Little Red River above Bee Rock quarry is not navigable; that below Bee Rock the river is navigable when the White River is at such a stage as to back water up to Bee Rock; that the proposed development of said company is located not less than 6 miles above Bee Rock; and that the reservoirs created by the dams will have no appreciable effect on the navigable capacity of the river below Bee Rock, or of White River, to which it is tributary. A report of the Chief of Engineers was read in support of these contentions. It was also claimed that there are no public lands or reservations involved.

The hearing closed at 5.10 p. m. and the Commission went into executive session. After discussion and consideration of the data and arguments presented, the Commission took the following action:

In the matter of the declaration of intention of the Arkansas Hydro-Electric Development Co. to develop water power on the Little Red River, in White and Cleburne Counties, Ark., by building a dam near Judsonia, in sec. 12, T. 8 N., R. 7 W., 5th P. M., raising the water level 60 feet, and by building a second dam near Higden and Edgemont, raising the water level about 70 feet and storing nine billion cubic feet of water, the Federal Power Commission having caused the matter to be investigated and it appearing from the report of the Chief of Engineers that the Little Red River above Bee Rock, about 6 miles below the proposed power development, is not navi-

gable; that below Bee Rock it is navigable solely by back water from the White River; and that the proposed project could have no appreciable effect on the navigation of the Little Red River or the White River, to which it is tributary; it was voted that the Commission finds that the interests of interstate or foreign commerce will not be affected by the proposed construction, and that a certified copy of the record of this finding be furnished to the declarant.

The executive secretary presented a list of nine applications, Nos. 223 to 231, inclusive, received since the meeting of June 6, 1921.

The executive secretary stated that 13 projects have been advertised since the meeting of June 6, 1921, and that two declarations of intention have been received.

The executive secretary submitted an opinion of the chief counsel, dated May 14, 1921 (L. Decisions, James B. Girand), on the question whether it is necessary under section 4(e) of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063), to advertise a project where the applicant has priority under section 23 of the act. The question arose in the case of James B. Girand, who on the date of the approval of the Federal Water Power Act held a permit under the act of February 15, 1901, and who under the priority of such permit applied for a license under the Federal Water Power Act for a power development on the Colorado River at Diamond Creek, Ariz., and a preliminary permit pending the preparation and submission of his plans to the Commission. The chief counsel holds that section 4(e) of the act does not require the advertising of applications for licenses, including preliminary permits, pending the completion of the necessary data, where the applicant has priority under section 23 of the act. The executive secretary stated that this opinion has received the preliminary approval of the Secretary of the Interior and of the Secretary of Agriculture. The opinion was approved by the Commission.<sup>1</sup>

The executive secretary presented 15 applications for preliminary permit or for license, upon which action was taken as follows:

#### *Preliminary permits.*

1. In the matter of the application of the Western Tie & Timber Co. (project No. 17) for a preliminary permit for power development near Eminence, Shannon County, Mo., in the Current River, a navigable stream, involving 8,000 horsepower, it was voted to issue a preliminary permit for the period of two years to said company, such permit to be issued subject to the provisions of the act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

A. The permittee, in the development of its plans for the project works, to give due consideration to the following special conditions, which may be embodied in the license if and when issued:

(a) The permittee to provide and operate, free of cost to navigation interests, means for towing or otherwise transporting, ties, logs, and lumber rafts through the pool and safely over the dam to the river below.

(b) The permittee to install at dam and operate at its own expense a derrick or other suitable appliance for passing small boats not exceeding 4 tons in weight, over or around the dam at the request of owners or operators thereof.

<sup>1</sup> See Decisions of the Commission, p. 219.



(c) The permittee in the operation of the dam and power plant, unless otherwise authorized by the Secretary of War, to allow a discharge past the dam of not less than 80 cubic feet per second between the hours of 8 p. m. and 5 a. m. and not less than 225 cubic feet per second between the hours of 5 a. m. and 8 p. m.

B. The permittee to install one standard river gauge in a manner approved by the United States Geological Survey; such gauge to be located at a point in Current River below the proposed dam site.

C. The permittee to make adequate foundation explorations at dam and power house location.

2, 3. The Commission directed that John Daniell (project No. 86) and H. S. Shaner (project No. 197), whose projects are in conflict with project No. 17, be notified of the decision of the Commission in this case, and that opportunity be given them to apply for a hearing on or before the next meeting of the Commission.

4. In the matter of the application of R. W. Hawley (project No. 32), for a preliminary permit for power development on Silver Creek, a tributary to American River in the Eldorado National Forest, in Eldorado County, Calif., involving 106,700 horsepower, it was voted to grant a preliminary permit for 18 months, such permit to be issued subject to the provisions of the act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee to install, maintain, and operate five stream gauges, to be located at or near each of the three proposed dam sites, on Silver Creek just above its junction with South Fork American River, and on South Fork American River just above the mouth of Silver Creek.

(b) The permittee to make adequate foundation explorations or borings at each dam and power-house location.

5. In the matter of the application of the City of Dothan (project No. 52) for a preliminary permit for power development at Chalkers Bluff, Geneva County, Ala., in Choctawhatchee River, a navigable stream involving 8,000 horsepower, it was voted to issue a preliminary permit for a period of 18 months, subject to the provisions of the act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee to install, maintain, and operate a stream gauge, to be located just below its proposed dam site, and a second stream gauge, to be located just above the mouth of the Little Choctawhatchee.

(b) The permittee to make adequate foundation explorations at dam and power-house locations.

(c) The permittee to make a careful determination of drainage area, so that discharge data on adjoining streams may be applied to Choctawhatchee River.

(d) The permittee to so design its project works that, if the United States shall desire at any time to construct a lock in the dam, it may be done without interfering with the continuous operation of the project; and to provide for the construction of forebay, guard piers, etc.

(e) If subsequent investigation by the permittee, by the United States, or by other interested parties shows that there is a suitable dam site in the vicinity of the head of the pool to be created by the proposed Chalkers Bluff Dam, the permittee may be required to make a reasonable increase or decrease in the proposed height of its dam, in order to provide for a full practicable utilization of the power possibilities of the stream and to further the interests of navigation.

(f) The license, if issued, to contain the condition that unless a smaller amount is approved by the Secretary of War the entire natural flow of the river shall be discharged over or past the dam wherever such flow is less than 750 cubic feet per second.

6. It was voted to reject the application of the Houston Power Co. (project No. 164) in conflict with the application of the City of Dothan (project No. 52).

#### *Licenses.*

7. In the matter of the application of the Snow Mountain Water & Power Co. (project No. 77) for a license for a power development on the South Fork of Eel River in Lake County, Calif., involving 15,000 horsepower and the use of 2,250 acres of public land in the California National Forest, the executive secretary reported that the dam is located on private land, is already under construction, and is nearly completed. Action was taken as follows:

Said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of the Federal Water Power Act, and of its ability to finance the construction of the project works proposed, notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality, the maps, plans, and specifications of the proposed project and project works having been approved by the Commission, and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that the license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

A. The dates for beginning and completing the various unconstructed portions of the project to be as follows:

Part 1, consisting of construction of the storage dam to initial height to be completed December 31, 1921.

Part 2, consisting of power house at storage dam, installation of additional equipment at Potter Valley power house, and completion of transmission system, to be completed December 31, 1922.

Part 3, consisting of raising the storage dam to height of ultimate development to be begun January 1, 1925, and completed July 1, 1926, unless such construction is postponed by order of the Commission.

B. The licensee to clear a marginal strip at least 200 feet wide around the entire reservoir site known as Pillsbury Lake with the 1,905 contour as the outer boundary of said strip on or before July 1, 1923, and thereafter to proceed with the clearing in any manner desired; provided that the clearing of the entire reservoir site within the 1,905 contour shall be completed on or before December 31, 1924, and that all brush, slash, etc., shall be disposed of in such manner as to prevent spread of fires or damage to timbered areas outside the reservoir site. In the event the dam is in future raised from the 1,900-foot spillway level to the 1,950-foot level, the licensee to clear the entire reservoir site up to the 1,955-foot contour within one year of the completion of the additional construction. The licensee also to clear and keep clear to an adequate width lands of the United States along open conduits and along transmission lines, and to dispose to the satisfaction of the Commission of

all temporary structures, brush, refuse, or unused timber on lands of the United States resulting from the clearing of lands or from the construction and maintenance of project works.

C. (a) In the construction of the unfinished portion of Scott Dam, if unforeseen and unsatisfactory abutment conditions are developed, the licensee to take such precautions and perform such extra work as the Commission may consider necessary to secure the safety of the structure.

(b) The licensee not to undertake the construction necessary to increase the height of Scott Dam from the 1,900-foot to the 1,950-foot spillway level until the safety of the foundations of the dam has been demonstrated to the satisfaction of the Commission by test of the initial development to full capacity. The licensee not to be authorized to proceed with such future development until detail plans therefor have received the approval of the Commission after such test.

(c) Before beginning construction of the power house at Scott Dam complete plans for said plant to be submitted to the Commission for approval.

(d) As a part of the proposed ultimate development of the project, and coincident with or prior to the raising of Scott Dam to the 1,950-foot spillway level, the licensee shall, if so ordered by the Commission, replace the 66-inch riveted steel pipe between stations 63+97.3 and 72+21.5 of the Potter Valley conduit with a conduit of capacity equal to that of the main tunnel from station 1+30 to 59+56, and provide sufficient installed capacity at Potter Valley power plant to utilize such full capacity of the conduit.

D. For the purpose of determining the stage and flow of the stream from which water is to be diverted for the operation of the project works and the amount of water held in and drawn from storage, the licensee to install on or before September 30, 1921, and thereafter maintain standard gauges in Pillsbury Lake at or near Scott Dam and on South Eel River below Scott Dam; to provide for daily readings of such gauges and for the adequate rating of the stream at the point specified and to continue the measurements of flow over and through Van Arsdale Dam and through Potter Valley power house by the methods now in use or by such other methods as the Commission may require.

8. In the matter of the application of the Western States Gas & Electric Co. (project No. 78) for a license for a power development, located on the South Fork of American River in Eldorado County, Calif., and within the Eldorado National Forest, involving the enlargement of an existing development to about 10,000 horsepower, action was taken as follows:

Said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project and project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The date for completing the only unconstructed portion of the project, viz, the enlargement of Twin Lakes Reservoir to 8,000 acre-feet capacity, to be December 1, 1921.

(b) For the purpose of determining the stage and flow of the stream from which water is to be diverted for the operation of the project works, and of the amount of water held in and drawn from storage, the licensee to install on or before September 30, 1921, and thereafter to maintain standard gauges at the following points:

In Finnon Reservoir, Medley Lakes Reservoir, Twin Lakes Reservoir, and Echo Lake Reservoir; below the outlet of each of the first three reservoirs above mentioned at the most suitable point for a gauging station; in the conduit from Echo Lake to American River drainage, in American River at or near the diversion dam for American River canal, and in American River canal between the intake and the entrance of the discharge channel from Finnon Reservoir.

The licensee to provide for a daily record at each gauge and for the adequate rating of said streams and canals at the points above specified. The installation of gauges, the rating of streams, and the determination of the flow thereof to be under the supervision of the local district engineer of the United States Geological Survey in accordance with standard requirements.

(c) As a condition precedent to the issuance of license applicant to be required to make payment of all rental charges for the occupancy of public lands accrued prior to the passage of the Federal Water Power Act and remaining unpaid, the amount of said delinquent charges to be determined by the departments concerned.

9. In the matter of the application of the McConnellsville-Malta Electric Co. (project No. 166) for a license for its existing project located at U. S. Dam No. 7, in the Muskingum River, at Malta, Ohio, involving 210 horsepower, a project formerly under lease by the War Department, action was taken as follows:

Said company having submitted satisfactory evidence of its compliance with the laws of the State of Ohio, as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to maintain and operate the project, notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality, the maps, plans, and specifications of the proposed project and project works having been approved by the Commission, and the plans of the dam and other structures affecting navigation having been approved by the Chief of Engineers and the Secretary of War; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, and that the contemplated improvement is desirable and justified in the public interest for the purpose of improving and developing the Muskingum River for the use and benefit of interstate or foreign commerce; it was voted that license be issued for a period of 50 years subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The licensee to maintain a head gate, set in masonry walls, and of such construction as shall meet the approval of the engineer officer in charge of the Muskingum River improvement, at the head of the branch race leading to its mill, and to maintain said head gate and race in good repair during the continuance of this license.

(b) In case of any damage that may result to the canal, the banks or other part of the improvement by reason of the neglect of the licensee to keep the aforesaid head gate and race in proper repair, the licensee to repair such damages immediately, or the engineer officer may, at his option, cause the necessary repairs to be made, and the licensee shall, on demand, repay the said engineer officer any sum which may have been thus expended by him.

(c) The license not to be construed to authorize the use of water power or land for any process of manufacture, the refuse or waste of which will be liable to obstruct navigation or to injure the water for drinking purposes, or to kill or drive away the fish from the vicinity.

(d) That in case the supply of water shall at any time be insufficient to furnish the authorized allowance to all consumers at McConnellsville, Ohio, preference to be given in the order of original establishment.

(e) The licensee at all times to be controlled by such reasonable rules and regulations in the interest of navigation, including the control of the level of pools, as may be made from time to time by the Secretary of War.

The executive secretary presented applications for license for transmission lines as follows:

10. In the matter of the application of the Pacific Gas & Electric Co. (project No. 150) for a license for a transmission line and appurtenant structures on and across public lands of the United States in Yavapai and Maricopa Counties, Ariz., and partially within the Prescott National Forest, action was taken as follows:

The Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Arizona, as required by section 9, subsection (b) of said act; and the maps, plans, and specifications having been approved by the Commission; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act.

11. In the matter of the application of the Pacific Gas & Electric Co. (project No. 180) for transmission line and appurtenant structures on and across public lands of the United States in Nevada and Yuba Counties, Calif., action was taken as follows:

The Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10 subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b) of said act, and of its ability to finance the construction of said line and structures; and the maps, plans, and specifications having been approved by the Commission, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act.

12. In the matter of the application of the Pacific Gas & Electric Co. (project No. 181) for a license for a transmission line and appurtenant structures on and across lands of the United States and lands within the Tahoe National Forest, in Placer and Nevada Counties, Calif., action was taken as follows:

The Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications having been approved by the commission; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1) of said act.

13. In the matter of the application of the Boston & Montana Milling & Power Co. (project No. 198) for a license for a transmission line and appurtenant structures, on and across public lands and reservations of the United States in Beaverhead County, Mont., action was taken as follows:

The Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Montana, as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications thereof having been approved by the Commission; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1) of said act.

14, 15. Action on the application of the Wisconsin-Minnesota Light & Power Co. (project No. 108) and of C. E. Loose (project No. 139) was deferred until the next meeting of the Commission.

It was voted that the executive secretary be authorized and instructed to prepare and, under the provisions of paragraph 8 of Orders, No. 2 of the Commission, of August 3, 1920, to execute and issue license or permit in the several cases, respectively, as thus approved by the Commission, and in substantial conformity with the conditions recited.

The executive secretary submitted a statement of the budget of the Commission for the fiscal year 1922 to be submitted to the Director of the Bureau of the Budget, which statement was referred to the chairman of the Commission for his examination and approval.

The Commission adjourned at 6 p. m.

O. C. MERRILL, *Executive Secretary.*

TWENTY-THIRD MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR ON  
JULY 25, 1921.

Meeting called to order at 4 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; and William V. King, chief accountant.

The record of the proceedings of July 11, 1921, was approved.

The executive secretary presented a list of five applications, Nos. 232 to 236 inclusive, received since the meeting of July 11, 1921.

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The executive secretary stated that three projects have been advertised since the meeting of July 11, 1921.

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The executive secretary presented five applications for license and two for preliminary permit, upon which action was taken as follows:

#### *Licenses.*

1. In the matter of the application of the Rock Creek Power Co., of Missoula, Mont. (project No. 70), for a license for a power project on Rock Creek and on lands of the United States within the Missoula National Forest, Granite County, Mont.; said company having submitted satisfactory evidence of its compliance with the laws of the State of Montana as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project and project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special conditions, and to such further conditions as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said National Forest:

(a) The licensee shall begin construction of the project works on or before July 1, 1922, and shall complete the same on or before July 21, 1924.

(b) The licensee shall operate and maintain a stream gauge described as "the old water gauge near Quigley, Mont., established by the Forest Service in 1910."

2. In the matter of the application of the Wisconsin-Minnesota Light & Power Co., of La Crosse, Wis. (project No. 108), for a license for a power project on the Chippewa River involving certain public lands of the United States and certain tribal lands within the Lac Court Oreilles Indian Reservation, Sawyer County, Wis., said company having submitted satisfactory evidence of its compliance with the laws of the State of Wisconsin as required by section 9, subsection (b) of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said

application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project and project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special conditions, and to such further conditions as the Secretary of the Interior shall deem necessary for the adequate protection and utilization of said Indian reservation:

(a) The dates of beginning and completing the project works shall be October 1, 1921, and April 1, 1923, respectively.

(b) During construction of the dam the licensee may be required to alter the approved plans and to take such further precautions and perform such additional work to intercept seepage and to otherwise insure the stability of the foundations and the safety of the structure as the Commission may consider necessary in view of conditions developed by further excavation and by results obtained in driving sheet piling.

(c) In view of the absence of any overflow spillway or reliable automatic discharge works, the licensee shall use extreme care to provide reliable mechanism for the operation of the Taintor gates, both by hydraulic and hand power, and to maintain same continuously in first-class operating condition. Provision shall also be made for the constant attendance of a gatekeeper and for his immediate release in case of accident or temporary incapacity during high-water periods.

(d) In case the United States shall at any time desire to provide navigation facilities at this dam, the licensee shall convey to the United States free of cost such of its lands and its rights of way and such right of passage through its dam or other structures and permit or exercise such control of pools as may be required to provide such navigation facilities.

(e) All merchantable timber shall be removed from the reservoir site prior to flooding.

(f) The licensee shall clear the reservoir area within the following described tracts to the satisfaction of the United States district engineer having general supervision over the construction of the project as a representative of the Commission:

T. 39 N., R. 6 W., secs. 1, 2 and 3.

T. 40 N., R. 6 W., secs. 31, 32, 35, S.  $\frac{1}{2}$  29, S.  $\frac{1}{2}$  30; and SE.  $\frac{1}{4}$  34; also the portions of secs. 28, 33, and W.  $\frac{1}{2}$  34 lying south of the west fork of Chippewa River.

T. 39 N., R. 8 W., sec. 1.

T. 40 N., R. 8 W., all of reservoir area bordering on Chief Lake, in sec. 36.

The licensee shall clear the remainder of the reservoir site to the extent required by the State Railroad Commission of Wisconsin.

(g) The licensee shall install and maintain stream gauges to the satisfaction of the Commission.

(h) The annual charges for the use of tribal lands within Indian reservations shall be \$1,200 per annum, subject to the readjustments provided for in the act and regulations.



3. In the matter of the application of Grace S. Eyre of Buena Vista, Colo. (project No. 130), for a license for a power project on Chalk Creek and on lands of the United States partly within the Leadville National Forest, Chaffee County, Colo., said applicant having submitted satisfactory evidence of her compliance with the laws of the State of Colorado as required by section 9, subsection (b), of the Federal Water Power Act and of her ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans and specifications of the proposed project and project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The licensee shall begin the construction of the project works on or before July 1, 1922, and shall complete same on or before August 1, 1924.

(b) The licensee shall install, operate, and maintain a stream gauge at or near the point where water is returned to the stream.

4. In the matter of the application of C. E. Loose, of Provo, Utah (project No. 139), for a license for a power project on East Walker River and on lands of the United States within the Mono National Forest, Mono County, Calif.; said applicant having failed to submit satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b) of the Federal Water Power Act, and the Commission finding that said project as submitted would not be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses; it was voted that the application as submitted be not approved, but that final action be suspended for a time reasonably sufficient for the applicant to present, either alone or in cooperation with the Walker River Irrigation District, a plan of development of the East Walker River which will make adequate provision for the full use of said river for the purposes of both power and irrigation, such plan to be accompanied by proposals of the manner in which and the agencies by which such plans may be put into effect.

5. In the matter of the application of the Idaho Power Co., a public utility corporation organized under the laws of the State of Maine (project No. 144) for a license to operate and maintain a constructed transmission line and appurtenant structures across the Fort Hall Indian Reservation, Idaho, said line being 25 miles in length, of which 7.2 miles cross tribal lands, and to be used for the exchange of power between the systems of the Idaho Power Co. and the Utah Power & Light Co., and to serve customers of the company in the vicinity of Blackfoot with power; the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Idaho, as required by section 9, subsection (b), of said act; the maps, plans, and specifications having

been approved by the Commission; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1), of said act, and subject also to such conditions, if any, as the Secretary of the Interior shall deem necessary for the adequate protection and utilization of said Indian Reservation.

*Preliminary permits.*

6. In the matter of the application of A. Reed Bingham, of Pensacola, Fla. (project No. 55), for a preliminary permit and license for a power project on the Perdido, Styx, and Blackwater Rivers, navigable waterways of the United States, in Baldwin County, Ala., and Escambia County, Fla., involving the construction of five dams, three to be located in the Perdido River and one each in the Styx and the Blackwater Rivers; said company having submitted satisfactory evidence of its right to perform within said States of Alabama and Florida the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall install and maintain recording gauges at points above tidal influence on the three streams involved.

(b) The permittee shall make satisfactory foundation explorations at the site of each proposed dam.

The permittee shall so design his project works that if the United States shall desire at any time to construct locks in the said dams it may be done without interfering with the continuous operation of the project. In such event the permittee will be required to provide for the construction of forebay, guard piers, etc., for the protection of navigation in a manner to be approved by the Chief of Engineers and the Secretary of War.

7. In the matter of the application of the Columbia Railway & Navigation Co., of Columbia, S. C. (project No. 199), for a preliminary permit and license for a power project, involving the construction of a canal between the Santee and Cooper Rivers, navigable waterways of the United States, the diversion of water from the Santee River, and the construction of a power plant on said canal near the outlet thereof, on the Cooper River; said company having submitted satisfactory evidence of its right to perform within said State of South Carolina the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality;

and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall install and maintain a standard recording gauge on the Santee River at or near Ferguson.

(b) The permittee shall make satisfactory foundation explorations at the power-house site.

(c) The permittee shall collect data and make such surveys as may be necessary to aid the district engineer officer in determining the amount of diversion that may be permitted at or near Ferguson without detriment to navigation in the Santee below that point.

(d) The permittee shall make a special study of the available power at its proposed power house to determine the effect on the economic operation thereof in case restrictions on diversions from the Santee are made to protect navigation on that river.

(e) The permittee shall make a study of the possibilities of storing water along the route of the proposed canal.

(f) The permittee shall make such surveys of the valley of the Cooper River, and such studies of the water of the Santee River, as will show clearly the effect of said project on the upper Cooper River Valley and on Charleston Harbor as regards flooding of the former or silting of the latter.

#### *Declaration of intention.*

The executive secretary presented a declaration of intention under section 23 of the Federal Water Power Act, upon which action was taken as follows:

In the matter of the declaration of intention of the village of Union City, Mich., to construct a dam across and in St. Joseph River in the vicinity of Riley Bridge, about 5 miles below said village, in Branch County, Mich., for the purpose of developing power; the Commission having caused investigation of such proposed construction to be made, and it appearing upon such investigation that said St. Joseph River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

The executive secretary submitted 15 applications for a determination under section 24 of the Federal Water Power Act that the lands described in the respective applications will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of said act, as follows:

1. Application of William B. Terrill (E, Power Reserves, Arkansas, DA-4) as to 40 acres adjacent to White River, Ark., described as the NW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  sec. 31, T. 21 N., R. 26 W., 5th P. M.

2. Applications of H. A. Wildhack (E, Power Reserves, Colorado DA-2) and C. Ben Johnston (E, Power Reserves, Colorado, DA-7), as to 40.03 acres adjacent to the south fork of White River, Colo., described as lot 1, sec. 1, T. 2 S., R. 91 W., 6th P. M., Colorado.

3. Application of Lawrence L. Offerle, of Meeker, Colo. (E, Power Reserves, Colorado, DA-4), as to 160 acres adjacent to the north fork of White River, Colo., described as the N.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  sec. 8, NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 9, T. 1 S., R. 91 W., 6th P. M., Colorado.

4. Application of J. A. McNew (E, Power Reserves, Colorado, DA-9) as to certain lands along White River, Colo., described as lot 6, sec. 31, and lot 5, sec. 32, T. 2 N., R. 101 W., 6th P. M., containing 160 acres.

5. Application of Solon C. Patterson (E, Power Reserves, Colorado, DA-10) as to 80 acres adjacent to the south fork of White River, Colo., described as the W.  $\frac{1}{2}$  SE.  $\frac{1}{2}$  sec. 1, T. 2 S., R. 91 W., 6th P. M.

6. Application of Guy M. Stealey (E, Power Reserves, Colorado, DA-13) as to 200 acres on the north fork of White River, Colo., described as the SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  and SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  sec. 25, and SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  and W.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 36, T. 1 N., R. 91 W., 6th P. M.

7. Application of Merle R. Banks (E, Power Reserves, Idaho, DA-16) as to 34.50 acres adjacent to Payette River, Idaho, described as lot 1, sec. 5, T. 8 N., R. 3 E., B. M.

8. Application of William B. Banks (E, Power Reserves, Idaho, DA-17) as to 35.70 acres adjacent to Payette River, Idaho, described as lot 2, sec. 8, T. 8 N., R. 3 E., B. M.

9. Application of Annie E. Black (E, Power Reserves, Idaho, DA-21) as to 40 acres adjacent to Snake River, Oreg., described as the SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  sec. 29, T. 10 S., R. 21 E., B. M.

10. Application of Will E. Orr (E, Power Reserves, Idaho, DA-23) as to 160 acres near the south fork of Boise River, Idaho, described as the SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , W.  $\frac{1}{2}$  SE.  $\frac{1}{2}$  sec. 7, and NW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  sec. 18, T. 1 N., R. 10 E., B. M.

11. Application of Howard S. Ash (E, Power Reserves, Idaho, DA-24) as to 40 acres near the south fork of Boise River, Idaho, described as the SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$  sec. 23, T. 3 N., R. 5 E., B. M.

12. Application of Christina Waddell (E, Power Reserves, Montana, DA-6) as to 314.95 acres adjacent to Birch Creek, Mont., described as lots 6, 7, 8, and 10, and NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$  sec. 8, and lots 8 and 9, sec. 9, T. 28 N., R. 9 W., M. P. M.

13. Application of Wilhelmina Beehrer (E, Power Reserves, Montana, DA-7) as to 160 acres adjacent to Big Hole River, described as the S.  $\frac{1}{4}$  SE.  $\frac{1}{4}$  sec. 19, NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$  sec. 29, and NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  sec. 30, T. 4 S., R. 8 W., M. M.

14. Application of J. C. Brandon (E, Power Reserves, Oregon, DA-14) as to 74 acres adjacent to Owyhee River, Oreg., described as lots 3, 7, and 10, sec. 3, T. 26 S., R. 44 E., W. M.

15. Application of E. E. Gardner (E, Power Reserves, Washington, DA-1) as to 87.90 acres adjacent to Clark Fork, Wash., described as lots 2 and 4, sec. 3, T. 40 N., R. 43 E., W. M.

It was voted that the Commission determines that the value of the lands described above under the respective applications, Nos. 1 to 15, inclusive, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act of June 10, 1920 (41 Stat. 1063), and that the executive secretary certify this determination to the Secretary of the Interior.

16. The Geological Survey, having filed a recommendation in pursuance of a request by Senator Kendrick (E, Power Reserves, Wyoming, DA-3) that a determination be made with respect to 2,240 acres of land adjacent to Green River, Wyo., and the facts with respect thereto having been presented to the executive secretary, it was voted that the commission determines that the value of the following described lands, 1,840 acres in area, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063):

**Sixth principal meridian, Wyoming:**

T. 36 N., R. 111 W., sec. 1, W.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ; sec. 2, lots 3 and 4, SW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SE.  $\frac{1}{2}$  of NW.  $\frac{1}{2}$ , E.  $\frac{1}{2}$  of SW.  $\frac{1}{2}$ , SE.  $\frac{1}{2}$ ; sec. 11, NE.  $\frac{1}{2}$  of NE.  $\frac{1}{2}$ , S.  $\frac{1}{2}$  of NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  of SE.  $\frac{1}{2}$ , W.  $\frac{1}{2}$  of SE.  $\frac{1}{2}$ ; sec. 12, W.  $\frac{1}{2}$  of NW.  $\frac{1}{2}$ ; sec. 14, W.  $\frac{1}{2}$  of E.  $\frac{1}{2}$ ; sec. 22, E.  $\frac{1}{2}$  of SE.  $\frac{1}{2}$ ; sec. 23, W.  $\frac{1}{2}$  of NE.  $\frac{1}{2}$ , W.  $\frac{1}{2}$ , NW.  $\frac{1}{2}$  of SE.  $\frac{1}{2}$ ; sec. 26, NW.  $\frac{1}{2}$  of NW.  $\frac{1}{2}$ ; sec. 27, E.  $\frac{1}{2}$ ;

but that it is unable to determine that the value of the following-described lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063):

**Sixth principal meridian, Wyoming:**

T. 36 N., R. 111 W., sec. 34, NE.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$ , N.  $\frac{1}{2}$  of SE.  $\frac{1}{2}$ .

17. James A. Hurst, having filed an application (E, Power Reserves, Arkansas, DA-1), for a determination with respect to 40 acres of land adjacent to Ouachita River, Ark., described as follows:

**Fifth principal meridian, Arkansas:**

T. 1 S., R. 22 W., sec. 2, SW.  $\frac{1}{2}$  of NE.  $\frac{1}{2}$ .

and it being reported by the executive secretary that said lands are within the flow line of a reservoir proposed to be constructed by the Garland Hydro Electric Power Co., it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

In order that the minutes of the Commission may contain record of the formal approval by the Commission of all licenses executed and issued by the executive secretary under the authority of paragraph 8 of the Commission's Orders, No. 2 of August 23, 1920, the executive secretary recommended that the licenses heretofore issued be approved by the Commission as issued. It was accordingly voted that the following licenses, accepted and issued on the dates respectively named, be and the same are approved by the Commission.

**Project No. 13:**

Henry Ford & Son, Inc.

Hudson River.

Albany, Saratoga, and Rensselaer Counties, N. Y.

Issued on March 3, 1921.

Accepted on March 29, 1921.

**Project No. 16:**

Niagara Falls Power Co.

Niagara River.

Niagara and Erie Counties, N. Y.

Issued on March 2, 1921.

Accepted on March 2, 1921.

**Project No. 58:**

Luther Hill.

Sawmill Creek.

Inyo County, Calif.

Issued on March 3, 1921.

Accepted on March 18, 1921.

**Projects Nos. 67 and 110:**

Southern California Edison Co.

San Joaquin River.

Fresno County, Calif.

**Projects Nos. 67 and 110—Continued.**

Issued on March 3, 1921.

Accepted on April 1, 1921.

**Project No. 104:**

The Home Colony.

Kitty Creek.

Park County, Wyo.

Issued on May 27, 1921.

(Minor project.)

**Project No. 126:**

John R. Love and G. A. von Brecht.

Salmon River.

Custer County, Idaho.

Accepted on July 8, 1921.

Issued July 19, 1921.

**Project No. 82:**

Alabama Power Co.

Coosa River.

Coosa and Chilton Counties, Ala

Accepted on June 25, 1921.

Issued on June 27, 1921.

**Project No. 80:**

Amazon Dixie Mining Co.

Transmission line.

Lolo National Forest.

Mineral County, Mont.

Issued on March 3, 1921.

Accepted on May 5, 1921.

**Project No. 83:**

Paving Granite Quarry Co.

Transmission line.

Black Hills National Forest.

Pennington County, S. Dak.

Issued on March 3, 1921.

Accepted on April 30, 1921.

**Project No. 87:**

Coast Valleys Gas & Electric Co.

Transmission line.

Monterey and San Benito Counties, Calif.

Issued on March 3, 1921.

Accepted on May 19, 1921.

**Project No. 107:**

Butte-Jardine Metals and Mines Co.

Transmission line.

Deerlodge National Forest.

Deerlodge County, Mont.

Issued on March 3, 1921.

Accepted on April 6, 1921.

**Project No. 151:**

Consolidated Spanish Belt Silver Mining Co.

Transmission line.

Toiyabe National Forest.

Nye County, Nev.

**Project No. 151—Continued.**

Issued March 3, 1921.

Accepted on July 18, 1921.

**Project No. 174:**

Southern California Edison Co.

Transmission line.

Sequoia National Forest.

Kern and Tulare Counties, Calif.

Issued on March 3, 1921.

Accepted on April 1, 1921.

**Project No. 192:**

C. B. Johnson.

Transmission line.

Inyo County, Calif.

Accepted on June 16, 1921.

Issued July 19, 1921.

**Project No. 208:**

Thomas P. Michell.

Transmission line.

Uncompahgre National Forest.

Ouray County, Colo.

Accepted on June 9, 1921.

Issued on July 19, 1921.

In view of the fact that Orders No. 11 of the Commission of June 6, 1921, by which the Commission amended its rules and regulations as promulgated by Orders, No. 9 of February 28, 1921, provided "that any permit or license heretofore issued may, upon written application by the permittee or licensee, be subject to the rules and regulations as herein amended, in lieu of the rules and regulations promulgated by said Orders, No. 9," it was voted that the executive secretary be authorized, upon the application of licensees and permittees, to issue the necessary supplementary instruments changing such licenses or permits so as to make them subject to the regulations as amended by said Orders, No. 11.

At 4.30 p. m. the Commission adjourned.

O. C. MERRILL, *Executive Secretary.*

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**TWENTY-FOURTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
AUGUST 15, 1921.**

Meeting called to order at 4.15 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; and Charles W. Friede, assistant accountant.

The record of the proceedings of July 25, 1921, was approved.

The chairman called attention to the opinion of the chief counsel on the subject of the restoration of lands within power reserves to entry, subject to the power reservation in section 24 of the Federal Water Power Act of June 10, 1920 (41 Stat. 1063), in which the chief counsel, contrary to the decision of the acting Secretary of the Interior of July 13, 1920 (47 L. D. 556), expresses the view that the patentee receiving a patent subject to said reservation may use the lands for power purposes, until such time as they are taken under the reservation, and advises, therefore, that, in the absence of a decision of

the courts on this question, determinations under section 24 be made, with the possibility in view that the courts might hold that the patentee may make a power development on the premises, for which compensation would have to be made if the lands are subsequently taken for power purposes under the rights reserved in the patent. It was voted that this matter be submitted to the Attorney General for his opinion.

The chief engineer presented a list of four applications, Nos. 237 to 240, inclusive, received since the meeting of July 25, 1921.

The chief engineer stated that nine projects have been advertised since the meeting of July 25, 1921.

The chief engineer presented four applications for license and one for preliminary permit, upon which action was taken as follows:

#### *Licenses.*

1. In the matter of the application of the Alaskan-American Paper Corp. (project No. 94) for a license for a power project at Orchard Lake, at the head of Shrimp Bay, Revillagigedo Island, Alaska, and on the lands of the United States within the Tongass National Forest, said corporation having submitted satisfactory evidence of its compliance with the laws of the Territory of Alaska, as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The licensee shall obtain suitable records of the stream flow and of the water held in and released from storage.

(b) The license shall contain and be subject to such conditions as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of the Tongass National Forest.

(c) This license is granted for the purpose of developing power for the manufacture of pulp and paper, or both, and upon assurance that abundant raw material in the form of wood is available to the licensee, no other use shall be made of the power (except incidental to, and in conjunction with, the manufacture of pulp and paper) without the prior approval of the Commission, and failure so to use the power will subject this license to cancellation by the Commission.

It was further voted that the application of Maj. R. L. Weeks (project No. 93) be rejected.

2. In the matter of the application of Charles S. Benefiel, of Paisley, Oreg., for a license for a power project on Chewaucan River, Lake County, Oreg., and on lands of the United States, the Commission having found that said project



is a minor project involving less than 100 horsepower and having under authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed in section 4 of said act; said applicant having submitted satisfactory evidence of his compliance with the laws of the State of Oregon as required by section 9, subsection (b), of the Federal Water Power Act, and of his ability to finance the construction of the project works proposed, the maps, plans, and specifications thereof having been approved by the Commission and the Commission finding that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under authority of section 10, subsection (i), of said act, and subject also to the following special condition:

(a) Construction work shall be begun by September 30, 1921, and shall be completed by September 30, 1922.

3. In the matter of the application of James Hulme, W. E. McKinnon, and Albert H. Piepenburg, an association of citizens doing business at Pine Knot, Calif. (project No. 227), for a license for a transmission line across public lands and land within the Angeles National Forest, San Bernardino County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i), of said act, and subject also to the following special condition:

(a) The licensee shall begin construction of the line on or before January 1, 1922, and complete the same on or before December 31, 1922.

4. In the matter of the application of the Alabama Power Co. (project No. 82) for an amendment of the license executed by the Federal Power Commission, June 27, 1921, for a project at Duncan's Riffle on Coosa River, Ala., so as to include that part of sec. 14, T. 21 N., R. 16 E., lying west of Coosa River, about one-half mile below the proposed dam site, for the purpose of obtaining stone for use in building the dam and power house, it was voted to approve the application, subject to the payment of a reasonable compensation for the use of said lands.

*Preliminary permit.*

5. In the matter of the application of the Kelly Mines Co., Seattle, Wash. (project No. 207), for a preliminary permit and license for a power project on the Little Susitna River and Fishhook Creek, on lands of the United States within the Knik precinct and recording district, Alaska, involving the construction of a diversion dam on Fishhook Creek, and power house located above

the mouth of Fishhook Creek, and a water conduit from the dam to the power house; and a second diversion dam on Little Susitna River, about one-half mile below the mouth of Fishhook Creek, a power house at a location below and a water conduit leading from the dam thereto; said company having submitted satisfactory evidence of its right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) *Stream-flow measurements.*—The permittee shall make provision for the determination of the flow of Fishhook Creek and Little Susitna River at the proposed points of diversion and shall keep accurate and sufficient records of such flow for a period of at least twelve consecutive months, beginning not later than January 1, 1922. The operations required of the permittee under this paragraph shall be performed under the supervision of and to the satisfaction of the Commission.

(b) *Foundation explorations.*—The permittee shall sink such test pits or make such borings or other foundation explorations as will make available sufficient information relating to character of foundations for each of the said dams and power houses to permit of the designing of such dams and power houses in accordance with good engineering practice and the checking of their safety, adequacy, and desirability in the development of the resources involved.

The chief engineer submitted two recommendations for determination under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. William C. Waters, 304 North Fourteenth Street, Corvallis, Oreg., having filed an application (E, Power Reserves, Oregon, DA-4) for a determination with respect to the following lands, 40 acres in area, adjacent to south fork of Alsea River.

Willamette meridian, Oregon:

T. 14 S., R. 7 W., sec. 19, lot 1,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. M. F. Franklin and S. S. Selby having filed an application (E, Power Reserves, Arkansas, DA-3) for a determination with respect to 40 acres of land adjacent to Buffalo Fork of White River, described as follows:

Fifth principal meridian, Arkansas:

T. 15 N., R. 18 W., sec. 8, NW.  $\frac{1}{4}$  of NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

The chief engineer presented a memorandum of policy and procedure with respect to determinations under section 24 of the Federal Water Power Act, stating that the memorandum embodies the policy recommended in the opinion of the chief counsel of July 26, 1921, on the subject of restoration of lands within power reserves to entry, subject to the power reservation. It was voted that action be deferred pending receipt of an opinion of the Attorney General on the question raised in said opinion of the chief counsel.

The chief engineer presented a memorandum calling the attention of the Commission to the fact that the chief engineer is without authority to perform the duties and exercise the authority of the executive secretary during the absence of the latter, and suggesting that the Commission amend Orders, No. 2, dated August 23, 1920, and Orders, No. 5, dated September 3, 1920, by adding to each order the following paragraph:

In the absence of the executive secretary his duties and authority as hereinbefore conferred shall devolve upon the chief engineer, whose signature as "Chief Engineer, in the absence of the Executive Secretary," shall be sufficient to show that his action was taken under the circumstances which entitled him to exercise this authority.

It was voted to amend said orders as suggested by the chief engineer.

The chief engineer presented a memorandum for the action of the Commission defining the field districts and recommending the selection of a field representative of the Commission for each district, stating that the First Assistant Secretary of the Interior has requested that action be deferred until the Secretary of the Interior returns. It was voted that action on this matter be deferred.

The following opinions of the chief counsel were presented by the chief engineer, who stated that each opinion has received the preliminary approval of the Secretary of the Interior and the Secretary of Agriculture, action being taken as follows:

1. An opinion, dated May 4, 1921\* (L. Decisions, Reservations), as to whether or not the word "reservations," as defined in section 3 of the Federal Water Power Act, includes (1) lands withdrawn under the several forms of withdrawal for irrigation purposes; and (2) lands within game preserves, bird preserves, etc. The chief counsel holds that as to—

(1) Lands withdrawn under the several forms of withdrawal for irrigation purposes, there are two classes of withdrawals authorized by the reclamation act, approved June 17, 1902 (32 Stat. 388), namely, (a) withdrawals under the first form of lands that may possibly be needed for the construction and maintenance of irrigation works; and (b) withdrawals under the second form of lands not supposed to be needed in the actual construction and maintenance of irrigation works, but which may possibly be irrigated from such works. As to lands withdrawn under the first form, they are to be regarded as included under the word "reservations," as defined in section 3 of the Federal Water Power Act; as to lands withdrawn under the second form, the provisions of said act, as amended June 25, 1910 (36 Stat. 835), make the withdrawal also complete until such time as the Secretary of the Interior issues public notice making such lands subject to disposition under the provisions of the reclamation act—that is, to homestead entry in conformity with the public-land laws, subject to the charges, limitations, etc., of the reclamation act, and that after the issue of such notice they cease to be "reservations" as defined in the Federal Water Power Act.

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\* See Decisions of the Commission, p. 220.

(2) That lands within game preserves, bird preserves, etc., are completely withdrawn from disposition under the public-land laws, so long as the reservation remains in force; and are, therefore, to be regarded as coming under the term "reservations," as defined in the Federal Water Power Act.

The opinion was approved by the Commission.

2. An opinion, dated June 14, 1921<sup>3</sup> (L. Decisions, Power Reserves), on the question whether the finding specified in the first proviso to section 4 (d) of the Federal Water Power Act, that the issue of the proposed license would not be inconsistent with the purpose for which the reservation was created, is required as to power reserves of either of the following classes: (1) Lands reserved for power purposes by Executive order; or (2) lands reserved under the operation of section 24 of said act. The chief counsel holds that as to both classes of reservation the statute does not require a finding of the Commission that the license will not interfere or be inconsistent with the purpose for which the reservation was created; that such a finding could serve no useful purpose; and that while within the letter of the statute power reservations of either class are not within the intent thereof. The opinion was approved by the Commission.

3. An opinion, dated July 11, 1921<sup>4</sup> (L. Decisions, Indian lands, Idaho Power Co.), as to the proper construction of section 10 (i), of the Federal Water Power Act, the question being whether the proviso would preclude the Commission from making the waiver authorized by said section 10 (i) in matters other than those affecting the tribal lands. The question arises in connection with the application of the Idaho Power Co. for a license for transmission line involving the use of 7.2 miles of tribal lands of a total of 25 miles of line, the remainder of which crosses allotted Indian lands. The chief counsel holds that the proviso under consideration would preclude the Commission from waiving the requirement of the act that adequate charges shall be imposed for the use of tribal lands within Indian reservations for the benefit of the Indians and adequate protection given to such Indians, so that the issue of the license would not be inconsistent with the purposes for which the reservation was made, but that this is its sole purpose; and that as to other provisions of the act the Commission may exercise the authority given by section 10 (i) to waive them. The opinion was approved by the Commission.

At 5.15 p. m. the Commission adjourned.

WM. KELLY, *Chief Engineer*

(In the absence of the executive secretary).

**TWENTY-FIFTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
SEPTEMBER 20, 1921.**

Meeting called to order at 4.15 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. Wm. Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; and William V. King, chief accountant.

The record of the proceedings of August 15, 1921, was approved.

The executive secretary presented a list of nine applications, Nos. 241 to 249, inclusive, received since the meeting of August 15, 1921.

<sup>3</sup> See Decisions of the Commission, p. 222.

<sup>4</sup> See Decisions of the Commission, p. 223.

The executive secretary stated that eight projects have been advertised since the meeting of August 15, 1921, and that three declarations of intention have been filed.

The executive secretary presented three applications for the issue, or amendment, of preliminary permits, and two applications for the issue, or amendment, of licenses, upon which action was taken as follows:

*Preliminary permits.*

1. In the matter of the application of George C. Hazelet, a citizen of the United States residing at Cordova, Alaska (project No. 188), for a preliminary permit and license for a power project at the outlet of Silver Lake, within the Chugach National Forest, Territory of Alaska, involving the construction of a dam across Duck River at the outlet of said lake and a pipe line to convey the water a distance of about 7,000 feet therefrom to a power house situated at the head of Galena Bay, the estimated power capacity being about 5,000 horsepower and the power developed to be used in the operation of a pulp mill to be constructed in the vicinity; said applicant having submitted satisfactory evidence of his right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two (2) years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall install and maintain a gauge in the vicinity of his proposed dam to ascertain the discharge of the stream.

(b) The permittee shall conclude arrangements with the Forest Service for the timber to be used in the operation of his proposed pulp mill.

2. In the matter of the application of the Uintah Power & Light Co., of Myton, Utah (project No. 190), for a preliminary permit and license for a power project on Spring Branch and Uinta River, in T. 2 N., R. 2 W., U. S. B. & M., partly within the Ashley National Forest, in Duchesne County, Utah, involving the construction of small diversion dams in Spring Branch and Uinta River, a 6-mile conduit consisting of 5 miles of open canal and 1 mile of wood-stave pipe penstock, and a power house in which the applicant proposes to install equipment of 4,800-kilowatt capacity, the said applicant being a public-service corporation and proposing to use the power to be developed in meeting the increased load requirements on its system in the vicinity of the project applied for; said company having submitted satisfactory evidence of its right to perform within said State of Utah the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity

having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of fifteen (15) months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall obtain adequate records of available stream flow.

(b) The permittee shall make adequate investigations of the foundations for the proposed dams and the proposed power house.

(c) The permittee shall so design the dam across Uinta River as to permit the passage of logs, ties, poles, or other forest products over or around the dam without hindrance or delay.

(d) That the license if issued shall contain a provision requiring that the licensee permit the use of the reservoir in Uinta River for the transportation of logs, ties, poles, or other forest products.

3. In the matter of the application of the United Mills Co., of Hickory, N. C. (project No. 69), for extension from October 1, 1921, to October 1, 1922, of the period of the preliminary permit issued by the Federal Power Commission to said company March 3, 1921, for a power project for the development of water power on Harpers Creek, Caldwell County, N. C., such extension being desired to enable the permittee intelligently to determine whether or not the natural flow of the stream is of sufficient volume to justify its development, it appearing that the extension of the period as requested is reasonable and necessary for the purpose stated; it was voted that the period of said preliminary permit be extended to October 1, 1922.

#### *Licenses.*

4. In the matter of the application of the Southern Sierras Power Co., of Riverside, Calif. (project No. 185), for a license for a power project on the headwaters of Mill Creek, in T. 1 S., R. 1 E., S. B. M., Calif., within the Angeles National Forest, involving the development of power by diverting water from High, Vivian, Falls, Alder, and Lost Creeks, and dropping same through a fall of approximately 2,047 feet to a power house on Mill Creek, all in San Bernardino County, Calif., the project also including a small storage reservoir of approximately 100 acre-feet capacity to be formed on Falls Creek by the construction of an 80-foot rock-fill dam; said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby

was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special conditions, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Angeles National Forest:

(a) The licensee shall construct and maintain suitable stream-gaging stations.

(b) The construction of the entire project applied for, except the Falls Creek storage dam and reservoir, shall be begun by January 1, 1922, and completed by June 30, 1923; and the construction of the Falls Creek storage dam and reservoir shall be begun by January 1, 1925, and completed by December 31, 1925.

5. In the matter of the application of the Alabama Power Co. (project No. 82), for an amendment of the license issued by the Federal Power Commission June 27, 1921, for a project at Duncan's Riffle, Coosa River, Ala., so as to include that part of section 14, T. 21 N., R. 16 E., lying west of Coosa River, about one-half mile below the proposed dam site, for the purpose of obtaining stone for use in building the dam and power house, it appearing that the payment of compensation for the use of said lands is provided for by the terms of the original license, it was voted to approve the amendment of said license, subject to the following special conditions:

(a) Control of the land authorized to be added to the project area to remain in the War Department.

(b) Operations of licensee to be limited to such as may be required in the removal of stone for use in construction of project works under the license, and to be under supervision of and subject to approval of the district engineer of the War Department.

The executive secretary submitted recommendations for determinations under section 24 of the Federal Water Power Act in 10 cases, upon which action was taken as follows:

1. Upon consideration of the application of the Arizona State Highway Commission (E, Power Reserves, Arizona DA-1), for a right of way for a highway, said right of way affecting certain lands of the United States designated as actually or prospectively valuable for the development of water powers or power for hydroelectric use or transmission, it was voted that the Commission finds and determines that the value of such lands so designated as are affected by said right of way as shown on two maps, one entitled "Right of way map, Globe—Geronimo Highway, Gila County, Arizona, within San Carlos Indian Reservation," and one entitled "Right of way map, State of Arizona, Globe—Geronimo Highway, Section D, Fed. Aid Project No. 15, Graham County Sta. 2682-52.83 to Sta. 2945-71.00," filed with the Office of Indian Affairs on June 1, 1921, will not be injured or destroyed for the purposes of power development by disposition thereof to the extent involved by the approval of said application, subject to the reservation prescribed by section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Joseph Tuyls, of Garfield County, Colo., having filed an application (E, Power Reserves, Colorado, DA-14) for a determination to be made with respect to the following described lands, 56.46 acres in area, adjacent to Grand River: Sixth principal meridian, Colorado:

T. 2 S., R. 85 W., sec. 23, lot 1 and NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the

said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. Upon consideration of the application of R. A. Richardson et al. (E, Power Reserves, Montana, DA-8) for a right of way for a canal, said right of way affecting certain lands of the United States reserved for power purposes, it was voted that the Commission finds and determines that the value of such lands so reserved as are affected by said right of way as shown on a map filed in the local land office at Missoula, Mont., and stamped as received in the Federal Power Commission on August 23, 1921, said map being part of an application (Missoula 09006) by R. A. Richardson et al. for said right of way, will not be injured or destroyed for the purposes of power development by disposition thereof to the extent involved by the approval of said application, subject to the reservation prescribed by section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. William G. Burgman, of Great Falls, Mont., having filed an application (E, Power Reserves, Montana, DA-9) for a determination to be made with respect to the following-described lands, 319.26 acres in area, adjacent to Birch Creek, Mont.:

Principal meridian. Montana.:

T. 28 N., R. 9 W., sec. 3, lots 8, 12, 13, 14, and 15, NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , S.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act approved June 10, 1920 (41 Stat., 1063).

5. In the matter of the application, Land-Cont. 102147-20, of the commissioners of Flathead County, for a permit under the act of March 4, 1915 (38 Stat., 1188), for right of way for a public highway including a bridge across Flathead River, at a point about 12 miles below Flathead Lake, involving the use of lands in power-site reserves, the Federal Power Commission, upon consideration of the facts as presented by the executive secretary, finds that the value of the said lands will not be injured or destroyed for the purposes of power development by the approval of the proposed right of way, provided that such right of way is permitted, subject to the following conditions in addition to the conditions imposed by section 24 of the Federal Water Power Act, which said condition shall be embodied in a stipulation to be signed by the applicants:

That the county of Flathead, as represented by its commissioners, shall, upon demand of the United States, at its own cost and expense and without claim for compensation, reimbursement, or damage, either entirely abandon so much of its highway or bridge for which right of way is requested as shall traverse lands in power-site reserves, or change the location of the said highway or bridge with respect to the structures of, or the lands affected by, any future power project authorized by the United States in pursuance of the provisions of the Federal Water Power Act, to the extent found necessary by the United States in order that the construction or operation of the said highway shall not be incompatible with the construction or operation of said power project. Notification by the United States to the county that such power project has been authorized shall be deemed a revocation of the permission to construct or use the said highway and bridge across the lands in power-site reserves to the extent that such construction and operation is found to be incompatible with the full utilization of the said lands for the purposes of the Federal Water Power Act.



6. L. J. Roberts, of Myrtle Point, Oreg., having filed an application (E, Power Reserves, Oregon, DA-2) for a determination to be made with respect to the following-described lands, 40 acres in area, adjacent to Middle Fork Coquille River:

Willamette meridian, Oregon:

T. 29 S., R. 11 W., sec. 19, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

7. William Carl Schneider, of Phoenix, Oreg., having filed an application (E, Power Reserves, Oregon, DA-5), for a determination to be made with respect to the following-described lands, 41.6 acres in area, near Illinois River:

Willamette meridian, Oregon:

T. 39 S., R. 8 W., sec. 5, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  (lot 1),

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

8. Charles E. Wade, of Grants Pass, Oreg., having filed an application (E, Power Reserves, Oregon, DA-6) for a determination to be made with respect to the following-described lands, 36.36 acres in area, near Rogue River:

Willamette meridian, Oregon:

T. 36 S., R. 6 W., sec. 21, lots 10 and 11,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

9. E. Arthur Wilber, of Meeker, Colo., having filed an application (E, Power Reserves, Colorado, DA-11) that a determination be made with respect to the following lands, 80 acres in area, adjacent to south fork White River, Colo.:

Sixth principal meridian:

T. 1 S., R. 91 W., sec. 9, S.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , 40 acres in area, included in the said land description, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), but that it is unable to determine that the SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , included in the said land description, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

10. Henry O. Nickel, of Reichle, Mont., having filed an application (E, Power Reserves, Montana, DA-1) for a determination to be made with respect to the following-described lands adjacent to Big Hole River:

Montana meridian, Montana:

T. 5 S., R. 8 E., sec. 4, lots 2 and 3, SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission is unable to determine that the value of

the said lands will not be injured or destroyed for the purposes of power development under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

The executive secretary submitted communication from the district engineer of the Forest Service at San Francisco, Calif., dated August 30, 1921, relative to an appropriation by the State of California of \$200,000 to be expended in a study of the water-power resources of the State and their utilization, stating that there had been brought to his attention the desirability of some form of cooperation between the Federal and State Governments in compiling existing data on undeveloped power sites and in making a study of that entire field. After discussion of the proposal it was voted by the Commission that arrangements be authorized for such cooperation with the State authorities, if satisfactory terms therefor can be arranged, and that the amount of \$15,000 or so much thereof as may be necessary be allotted from the appropriation for the expenses of the Federal Power Commission to cover the expenses of such cooperation upon the part of the Federal Government.

The executive secretary submitted a recommendation as to matters which should be embodied within the annual report of the Federal Power Commission to Congress, and as to the printing of the same, stating that such report should embody information as to the minutes of the Commission, its decisions and as to licenses issued by the Commission. It was voted to authorize the printing of the annual report, and that it be prepared in as condensed a form as will meet the requirements of the Federal Water Power Act.

The executive secretary submitted the recommendation that Major Marks, the district engineer at St. Paul, Minn., be designated as an examiner of the Commission, under section 4(g) of the Federal Water Power Act, in order that he may have authority to administer oaths and affirmations, examine witnesses and receive evidence in making investigations with respect to applications for any permit or license, or any other investigation with which he may be charged under the provisions of said act. It was voted that Major Marks be designated as an examiner of the Commission for the purposes here stated.

The executive secretary presented the estimates of appropriation to be submitted to the Director of the Budget, and explained the several items thereof to the Commission. The estimates were approved by the Commission, with the understanding that the executive secretary would limit the expenditures to what are strictly required in the interest of the service.

At 5.15 p. m. the Commission adjourned.

O. C. MERRILL, *Executive Secretary.*

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TWENTY-SIXTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
OCTOBER 6, 1921.

Meeting called to order at 3.40 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. Wm. Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of September 20, 1921, was approved.

The executive secretary presented a list of seven applications, Nos. 250 to 256, inclusive, received since the meeting of September 20, 1921.

. . . . .

The executive secretary stated that three projects have been advertised since the meeting of September 20, 1921, and that two declarations of intention have been filed.

\* \* \* \* \*

The executive secretary presented one application for license and four applications for preliminary permit, upon which action was taken as follows:

*License.*

1. In the matter of the application of the Southern Sierras Power Co. of Riverside, Calif. (project No. 255), for a license for a transmission line and appurtenant structures across public lands and lands within the Angeles National Forest, San Bernardino County, Calif. (a relinquishment having been filed of the rights and privileges under application No. 227 of James Hulme, W. E. McKinnon, and Albert H. Piepenburg for the same privilege, issue of license having been authorized August 15, 1921), the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b) of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and subject also to the condition that the licensee shall begin construction of the line on or before January 1, 1922, and complete the same on or before December 31, 1922.

*Preliminary permits.*

2. In the matter of the application of the Connecticut River Co. of Windsor Locks, Conn. (project No. 173), for a preliminary permit and license for a power project on the Connecticut River, a navigable water of the United States, involving the construction of a dam in said river near the foot of Enfield Rapids, in the vicinity of Warehouse Point, Conn., of such height as will give a navigable depth above the dam of approximately 12 feet, said company having submitted satisfactory evidence of its right to perform within said State of Connecticut the acts necessary for the purpose of such permit, and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act; full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, water-power development and other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee shall include in its plans of the proposed project works a lock and navigable approaches thereto satisfactory to the Secretary of War.

(2) The permittee shall make a special study of all available and pertinent stream gauge and flow records on the Connecticut, Chicopee, and Westfield Rivers in order that it may so design its project works as to make the best possible use of the flow of the Connecticut River without undue interference with other interests. These data shall be submitted in connection with the plans of the proposed project works in proof of the fact that the best possible design of said project works has been developed.

(3) The permittee shall make foundation explorations to the satisfaction of the commission.

(4) If license is issued for the said project, it shall be subject to the following special conditions:

(a) That on notification from the Secretary of War that the United States is prepared to prosecute the improvement of the river to an extent such as to require construction of a new lock, the licensee shall construct said lock and navigable approaches thereto without expense to the United States, in accordance with plans and specifications approved by the Chief of Engineers and the Secretary of War, and shall convey to the United States free of cost such land, rights of way, or of passage through the structures as, in the judgment of the Chief of Engineers, may be necessary for the establishment and maintenance of facilities for navigation past the power development, and the licensee shall furnish free of cost to the United States power for the operation of such facilities. Under the provisions of this condition the licensee will not be required to construct the lower navigable approach beyond a line 100 feet downstream from the downstream extremity of the lower guide wall of the lock.

(b) That the construction of the lock aforesaid shall be commenced within three months of receipt of aforesaid notification from the Secretary of War, shall be vigorously prosecuted, and shall be completed within two years of date of such notification.

(c) That pending the construction of a new lock and navigable approaches thereto, the licensee shall construct and maintain without expense to the United States facilities (by the construction of a small lock and otherwise) for navigation past the power development equal to those now existing.

(d) That upon the completion of the dam authorized by such license the existing dam at the head of Enfield Rapids shall be removed.

(e) That the licensee shall reimburse the United States for any expenditures found necessary to remedy injuries caused by the said power development or its operation to the navigable channels of the Connecticut.

(f) That the licensee shall make no claim for damages against the United States on account of any reduction of power head which may be caused by the construction of a lock and dam for the improvement of navigation downstream from said power development.

(g) That no tolls shall be charged by the licensee for the privilege of navigating the Connecticut River through the project authorized by such license.

3. It was voted that the application of A. P. Connor, of Springfield, Mass., for a preliminary permit (project No. 40) for power development on the Connecticut River, in conflict with the application of the Connecticut River Co., be rejected.

4. In the matter of the application of the town of Petersburg, Alaska (project No. 201), for a license for a power project on Crystal Lake and its outlet,

which is located on Mitkof Island about 16 miles south of Petersburg, on lands of the United States within the Tongass National Forest, involving the development of 500 horsepower with provision to increase to 1,000 horsepower, to supply power and light and for miscellaneous purposes in Petersburg and its vicinity, it appearing that the date at which the construction of the proposed project could be undertaken is, for financial reasons, remote and uncertain, and that, therefore, it is advisable that a preliminary permit rather than a license be issued, said company having submitted satisfactory evidence of its right to perform within the Territory of Alaska the acts necessary for the purposes of such permit and of its ability to finance the preliminary work; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard; and it further appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee shall obtain suitable records of the stream flow available to the project.

(2) Before license is issued the permittee shall submit satisfactory evidence of its ability to finance the construction proposed.

5. In the matter of the application of Charles B. Hawley, of Washington, D. C. (project No. 223), for a preliminary permit for the construction of a power project on New River, a navigable waterway of the United States, at Sandstone Falls, Raleigh and Summers Counties, W. Va., involving the construction of a low diversion dam above said falls, a forebay, and a power house discharging below said falls, the applicant having submitted satisfactory evidence of his right to perform within the State of West Virginia the acts necessary for the purpose of such permit, and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee shall make foundation explorations and stream-flow measurements to the satisfaction of the Commission.

(2) The permittee shall make a study of and submit a report to the Commission on the effect of his proposed project on the roadbed of the Chesapeake & Ohio Railroad.

(3) The license, if issued, will require that the plant when constructed be operated in such a manner that it will not interfere unreasonably with navigation and with the operation of other power plants below.

The executive secretary submitted recommendation for determinations under section 24 of the Federal Water Power Act in six cases, upon which action was taken as follows:

1. Martha F. Duffes, of Denver, Col., having filed an application (E. Power Reserves, Colorado, DA-15) for a determination to be made with respect to the following-described lands, 120 acres in area, near Williams Fork:

Sixth principal meridian, Colorado.

T. 1 S., R. 78 W., sec. 17, E.  $\frac{1}{2}$  SE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Ralph L. Ludlum, of Meeker, Colo., having filed an application (E. Power Reserves, Colorado, DA-15) for a determination to be made with respect to the following-described lands, 15.30 acres in area, adjacent to Bear River:

Sixth principal meridian, Colorado.

T. 7 N., R. 96 W., sec. 23, lot 21,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. Howard H. McDowell, of Hoaglin, Douglas County, Oreg., having filed an application (E. Power Reserves, Oregon, DA-18) for a determination to be made with respect to the following-described lands, 40 acres in area, near North Umpqua River:

Willamette meridian, Oregon.

T. 26 S., R. 3 W., sec. 1, SW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. Henry Austin, of Carlton, Wash., having filed an application (E. Power Reserves, Washington, DA-5) for a determination to be made with respect to the following-described lands, 80 acres in area, adjacent to Methow River:

Willamette meridian, Washington.

T. 32 N., R. 22 E., sec. 20, lot 8, NW.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

5. Martin L. Kimmel, of Glide, Oreg., having filed an application (E. Power Reserves, Oregon, DA-17) for a determination to be made with respect to the following-described lands, 40 acres in area, adjacent to North Umpqua River:

Willamette meridian, Oregon.

T. 26 S., R. 3 W., sec. 9, SE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented to the executive secretary, it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

6. R. M. Ruthven, of Cotter, Ark., having filed an application (E, Power Reserves, Arkansas, DA-6) for a determination to be made with respect to the following-described lands, 91.7 acres in area, near White River:

Fifth principal meridian, Arkansas:

T. 20 N., R. 15 W., sec. 24, W.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

The executive secretary submitted a communication from the secretary for the United States section of the International Joint Commission, dated August 22, 1921, requesting that any comments which the Commission may desire to make upon the plans of the engineers in the matter of the St. Lawrence navigation and power investigation be submitted for consideration; together with a memorandum by Col. William Kelly, chief engineer of the Federal Power Commission on the subject. After discussion, it was voted that the memorandum of Colonel Kelly be furnished in compliance with the request.

The commission deferred consideration of the matter of amendment of the Federal Water Power Act so as to authorize the use of the appropriations of the Commission for the employment of its personnel.

At 4.15 p. m. the Commission adjourned.

O. C. MERRILL, *Executive Secretary*.

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**TWENTY-SEVENTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
OCTOBER 31, 1921.**

Meeting called to order at 4.15 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; J. F. Lawson, assistant attorney; and Charles W. Friede, assistant accountant.

The record of the proceedings of October 6, 1921, was approved.

The executive secretary presented a list of four applications, Nos. 257 to 260, inclusive, received since the meeting of October 6, 1921.

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The executive secretary stated that 20 projects had been advertised since the meeting of October 6, 1921, and that one declaration of intention had been filed.

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The executive secretary presented three applications for preliminary permit, one application for amendment of authorization for preliminary permit, one application for issuance of license, and one application for amendment of authorization for license, as follows:

*Preliminary permits.*

1. In the matter of the application of the Elmore Copper Co., of Mountain Home, Idaho (project No. 154), for a preliminary permit and license for a power project on the south fork of Boise River and on lands of the United States in Elmore County, Idaho, involving the construction of a dam, reservoir, and power house to develop approximately 3,000 horsepower, and transmission line to mine and town site of said company; said company having submitted

satisfactory evidence of its right to perform within said State of Idaho the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) If license is issued it shall be for a period of 50 years and may contain a special provision which will reserve to the United States the right to regulate the discharge from the reservoir to the extent necessary to protect irrigation rights on the lower river, particularly during periods of low flow in the irrigation season, the extent and character of such regulation to be more specifically set forth in the license when the capacity of the reservoir and the effect of proposed storage are better known.

(2) The permittee shall install as soon as practicable and thereafter maintain a standard stream-gauge and stream-gauging station at such point as may be necessary to determine the stage and available flow of the South Fork of Boise River at the dam site and shall provide for a daily record of gauge heights and for the adequate rating of the said stream-gauging station.

(3) The permittee shall make such examinations and surveys, and sink such test pits or make such borings or other foundation explorations as will determine the most favorable site for the dam and make available sufficient information relating to the character of foundations to permit of the designing of said dam and power house in accordance with good engineering practice and the checking of their safety, adequacy, and desirability in the development of the resources involved. Foundation investigations at the dam site selected shall be conducted with special care and thoroughness and complete records thereof shall be kept for the information of the Commission.

2. In the matter of the application of the Louisiana Gravity Canal Co., of New Orleans, La. (project No. 172), for a preliminary permit and license for a power project on the Calcasieu River, Whiskey Chitto Creek, Bayou Cocodrie and Bayou Nezpique, navigable waterways of the United States in Evangeline, Acadia, Allen, Jefferson Davis, and adjoining parishes, Louisiana, involving the construction of five power houses in connection with a system of reservoirs and irrigation canals; said company having submitted satisfactory evidence of its right to perform within said State of Louisiana the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other bene-



ficial public uses; it was voted that preliminary permit be issued for a period of 15 months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee shall install as soon as practicable and thereafter maintain standard stream gauges and stream-gauging stations at such points as may be necessary to determine the stage and available flow of Bayou Cocodrie, Calcasieu River, and Whiskey Chitto Creek at each of the proposed reservoirs, and shall provide for daily records of such gauges and for the adequate rating of the stream-gauging stations.

(2) The permittee shall sink such test pits or make such borings or other foundation explorations as will make available sufficient information relating to character of foundations for each of the said dams and power houses, to permit of the designing of such dams and power houses in accordance with good engineering practice, and the checking of their safety, adequacy, and desirability in the development of the resources involved.

(3) License, if issued, shall be for a period of 50 years and shall contain the necessary special conditions or provisions to agree with the provisions of the permits for reservoir construction already granted by the War Department and to safeguard navigation interests on the lower reaches of each of the streams involved.

3. In the matter of the application of the Ocklawaha Reclamation Farms, a corporation of Ocala, Fla. (project No. 177), for a preliminary permit and license for a power project on the Ocklawaha River, a navigable waterway of the United States, in Marion County, Fla., involving the construction of a power plant at a proposed Government dam for navigation purposes at Moss Bluff, said corporation having submitted satisfactory evidence of its right to perform within said State of Florida the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses; it was voted that preliminary permit be issued for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee shall install as soon as practicable and thereafter maintain a standard stream gauge and stream-gauging station at such point as is best suited to determine the stage and available flow of Ocklawaha River at Moss Bluff, and shall provide for a daily record of gauge heights and for the adequate rating of said gauging station.

(2) License, if issued, shall be for a period of 50 years and shall contain the following special provisions:

(a) The licensee shall furnish free of cost to the United States power for the operation of navigation facilities at the dam, including lights and signals, whether constructed by the licensee or by the United States.

(b) The United States specifically retains and safeguards the right to use water in such amounts to be determined by the Secretary of War as may be necessary for the purposes of navigation.

4. In the matter of the application of the Connecticut River Co., of Windsor Lock, Conn. (project No. 173), for the elimination of paragraphs E and F of

special condition No. 4, in accordance with which the issuance of preliminary permit had been authorized by the Federal Power Commission at its meeting of October 6, 1921, on the ground that said paragraphs are ambiguous and might seriously affect the financing of the project, said paragraphs having been originally proposed by the Chief of Engineers, United States Army, but no longer considered necessary or desirable by him, and it appearing that said paragraphs would serve no useful purpose, it was voted that said authorization be amended by striking therefrom the said paragraphs, which are as follows:

"E. That the licensee shall reimburse the United States for any expenditures found necessary to remedy injuries caused by the said power development, or its operation, to the navigable channels of the Connecticut.

"F. That the licensee shall make no claim for damages against the United States on account of any reduction of power head which may be caused by the construction of a lock and dam for the improvement of navigation downstream from said power development."

#### *Licenses.*

5. In the matter of the application of Henry Weber, of Buena Vista, Colo. (project No. 253), for a license for a minor project consisting of a diversion dam approximately 2 feet high and 150 feet long, a conduit 14 to 18 inches in diameter and approximately 977 feet in length, and a power house, on Denny Creek and on lands of the United States within the Leadville National Forest, Chaffee County, Colo., the Commission having found that said project is of not more than 100 horsepower capacity, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said applicant having submitted satisfactory evidence of its compliance with the laws of the State of Colorado as required by section 9, subsection (b), of said act, and of his ability to finance the construction of said project; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1), of said act, and subject also to the following special conditions and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Leadville National Forest.

(1) The licensee shall begin construction of its project works on or upon December 1, 1921, and shall complete the same on or upon July 31, 1922.

6. In the matter of the application of Grace S. Eyre, of Buena Vista, Colo. (project No. 130), for amendment of special conditions in accordance with which the issuance of license had been authorized by the Federal Power Commission at its meeting of July 25, 1921, by extending from July 1, 1922, to July 1, 1923, the time within which construction should be begun and by extending from August 1, 1923, to August 1, 1924, the time within which construction shall be completed, such extensions being desired on the ground that business depression in the mining industry in the vicinity of Buena Vista made it desirable to defer construction; it appearing that the extensions of time as requested are reasonable, it was voted that the time for beginning and completing construction be extended to July 1, 1923, and to August 1, 1924, respectively, and that the said authorization be amended accordingly.

*Declarations of intention.*

The executive secretary presented declarations of intention under section 23 of the act, upon which action was taken as follows:

1. In the matter of the declaration of intention of Fred D. Breit, of Chicago, Ill., to construct a dam and other works across Fox River, near the village of Dayton, La Salle County, Ill., the Federal Power Commission having caused the matter to be investigated, and it appearing from the report of such investigation that the stretch of Fox River involved in the proposed construction has been used and is suitable for use for the transportation of persons or property in interstate commerce, it was voted that the Commission finds that Fox River in the portion affected by the proposed construction is a navigable water of the United States within the meaning and for the purposes of the Federal Water Power Act.

2. In the matter of the declaration of intention of the Pigeon River Lumber Co. to construct power projects on Pigeon River in T. 64 N., Rs. 6 and 7 E., fourth principal meridian, Minnesota, the Federal Power Commission, having caused the matter to be investigated, and it appearing from the report of such investigation that Pigeon River is suitable for use for the transportation of persons or property in interstate or foreign commerce, it was voted that the Commission finds that Pigeon River is a navigable water of the United States within the meaning and for the purposes of the Federal Water Power Act.

3. In the matter of the declaration of intention by Mr. Frank M. Waring, of Tyrone, Pa., to construct a power project in Juniata River in Perry County, Pa., between Losh's Run Station and Newport, Pa., the Federal Power Commission having caused the matter to be investigated and it appearing from the report of such investigation that the alteration in the flow of the Juniata River which would be caused by the proposed construction would affect the navigable capacity of the Susquehanna River, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

4. In the matter of the declaration of intention by Ira E. Cornelius to construct a dam across White River in Benton County, Ark., in or near sec. 35, T. 19 N., R. 29 W., fifth principal meridian, the Federal Power Commission having caused the matter to be investigated and it appearing from such investigation that the proposed project will not produce any noticeable effects upon the navigable capacity of White River, it was voted that the commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

*Restorations to entry.*

The executive secretary submitted recommendation for determinations under section 24 of the act in nine cases, upon which action was taken as follows:

1. Jake A. Bauer, jr., of Cedar Glades, Ark., having filed an application (E. Power Reserves, Arkansas, DA-7) for a determination to be made with respect to the following-described lands, 40 acres in area, near Ouachita River:

Fifth principal meridian, Arkansas:

T. 1 S., R. 20 W., sec. 7, SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Upon consideration of the application of C. L. Flack (E, Power Reserves, California, DA-10) for a right of way for a canal, said right of way affecting certain lands of the United States reserved for power purposes, it was voted that the Commission is unable to determine that the value of such lands so reserved as are affected by said right of way as shown on a blue print of a map filed in the local land office at Los Angeles, Calif., and stamped as received on January 5, 1921, said map being part of an application (Los Angeles 033738) by C. L. Flack, for said right of way, will not be injured or destroyed for the purposes of power development by disposition thereof to the extent involved by the approval of said application, subject to the reservation prescribed by section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. John J. Zimmer, of Boise, Idaho, having filed an application (E, Power Reserves, Idaho, DA-18) for a determination to be made with respect to the following-described lands, 33.5 acres in area, adjacent to Boise River:

Boise meridian, Idaho:

T. 3 N., R. 4 E., sec. 28, lot 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. W. W. Miller, of Scotts Mills, Oreg., having filed an application (E, Power Reserves, Oregon, DA-9) for a determination to be made with respect to the following-described lands, 80 acres in area, near Abaqu Creek:

Willamette meridian, Oregon:

T. 7 S., R. 1 E., sec. 13, W.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

5. Alexander F. Martin, of Maupin, Oreg., having filed an application (E, Power Reserves, Oregon, DA-15) for a determination to be made with respect to the following-described lands, 237.16 acres in area, adjacent to the Metolius River, Oreg.:

Willamette meridian, Oregon:

T. 5 S., R. 13 E., sec. 12, NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

T. 5 S., R. 14 E., sec. 6, E.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 7, E.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , NW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

6. Mr. Louis R. Rovny, of Prineville, Oreg., having filed an application (E, Power Reserves, Oregon, DA-16) for a determination to be made with respect to the following-described lands, 237.16 acres in area, adjacent to the Metolius River, Oreg.:

Willamette meridian, Oregon:

T. 10 S., R. 10 E., sec. 28, lots 1, 2, 3, 4, and 5, SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , and the facts with respect thereto having been presented by the executive

secretary, it was voted that the Commission determines that the value of the following lands, 80 acres in area:

Willamette meridian, Oregon:

T. 10 S., R. 10 E., sec. 28, SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), but that it is unable to determine that the value of the remainder of the lands described will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

7. Jerome Snyder, of Anatone, Wash., having filed an application (E, Power Reserves, Washington, DA-3) that a determination be made with respect to the following lands, 223.45 acres in area, adjacent to Grande Ronde River:

Willamette meridian, Washington:

T. 7 N., R. 44 E., sec. 34, lots 6, 7, 8, 9, and 11; sec. 35, lots 9 and 11,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of lots 6, 7, and 8 of said section 34, and lot 11 of said section 35, being 138.95 acres in area, will not be injured or destroyed for the purposes of power development by location, entry, or selection as provided by section 24 of the Federal Water Power Act, but it is unable to determine that the value of the remainder of the lands described will not be injured or destroyed for the purposes of power development by location, entry, or selection as provided by section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

8. George D. Magowan, of Circle, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-3) for a determination to be made with respect to the following-described lands, 280 acres in area, adjacent to Wind River and Torrey Creek, Wyo.:

Sixth principal meridian, Wyoming:

T. 41 N., R. 106 W., sec. 15, W.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 22, E.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the following lands, 160 acres in area,

Sixth principal meridian, Wyoming:

T. 41 N., R. 106 W., sec. 22, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , S.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), but that it is unable to determine that the value of the remainder of the lands described will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

9. Benjamin H. Lockhart, of Abe, Mont., having filed an application (E, Power Reserves, Montana, DA-5), for a determination to be made with respect to the following described lands, 160 acres in area, adjacent to Madison River:

Montana meridian, Montana:

T. 10 S., R. 1 W., sec. 12, NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power develop-

ment by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

The executive secretary presented a letter from the National Electric Light Association requesting a hearing before the commission for the purpose of reconsidering regulations 16 and 20 as adopted by the Commission at its meeting of May 28, 1921, and promulgated by orders No. 11 of June 6, 1921. He reviewed briefly the reasons which had led to the general revision of the regulation which had been promulgated by orders No. 9 of February 28, 1921, and called attention to the fact that the Water Power Development Committee of the National Electric Light Association had been freely consulted in such revision, had, with the exception of section 3, of regulation 17, freely acquiesced in the regulations as amended, and had made favorable report thereon to the annual meeting of the association held in Chicago in June. It was agreed that a hearing should be granted if desired, but that in view of certain pressing engagements of members of the Commission such hearing must be deferred for several weeks.

The executive secretary brought to the attention of the Commission a request of Senator Walsh, of Montana, that the Commission take early action upon certain applications for permits affecting the Clarks Fork of the Columbia River in Montana. After consideration the Commission voted that in view of the investigation already under way on the Columbia and its tributaries by the Columbia River Board it would be inadvisable to act upon individual applications until after the board had presented its report on a comprehensive scheme for development of the Columbia and Clarks Fork between Flathead Lake and the mouth of the Snake River in the interest of water power, irrigation, and navigation.

At 5.15 p. m. the Commission adjourned.

O. C. MERRILL, *Executive Secretary.*

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TWENTY-EIGHTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
NOVEMBER 21, 1921.

Meeting called to order at 4 p. m.

Present, Secretary Fall (presiding at the request of the Secretary of War); Secretary Wallace; Assistant Secretary of War Wainwright (representing the Secretary of War); O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and Charles W. Friede, assistant accountant. The meeting was devoted to hearing representatives of the National Electric Light Association, American Gas Association, American Institute of Electrical Engineers, manufacturers of electrical and other water-power machinery, operators of water-power properties, and representatives of electrical and engineering technical journals, and others who appeared upon proposed changes in Regulations 16 and 17, governing the matters of depreciation and amortization and changes in the proposed system of accounts to be prescribed for licensees under the Federal Water Power Act.

A record of the hearing, made by Morgan and Edmonston, shorthand reporters, is in the files of the Commission.

At the conclusion of the hearing the Commission adjourned at 5.45 p. m.

O. C. MERRILL, *Executive Secretary.*

TWENTY-NINTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
JANUARY 16, 1922.

Meeting called to order at 4 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; William V. King, chief accountant; and Charles W. Friède, assistant accountant.

The meeting was devoted to hearing representatives of the cities of St. Paul and Minneapolis, Minn., and the Northern States Power Co. in the matter of the issue of a permit or license for the construction of a power project at the Twin Cities Dam, Mississippi River.

A record of the hearing, made by Morgan and Edmonston, shorthand reporters, is in the files of the Commission.

At the conclusion of the hearing the Commission adjourned at 7 p. m.

O. C. MERRILL, *Executive Secretary*.

THIRTIETH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR ON  
JANUARY 24, 1922.

Meeting was called to order at 4 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The records of the proceedings of October 31, 1921; November 21, 1921; and January 16, 1922, were approved.

The executive secretary presented a list of 15 applications, Nos. 261 to 275, inclusive, received since the meeting of October 31, 1921.

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The executive secretary stated that 16 projects have been advertised since the meeting of October 31, 1921, and that five declarations of intention have been filed.

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The executive secretary submitted an opinion by the chief counsel, dated November 21, 1921\* (L, Opinions, Wyoming Power Company, John T. Clarke), on the question of the construction of section 9 (b) of the Federal Water Power Act, which requires as a condition precedent to the issue of a license for a power development that the applicant shall submit to the Commission satisfactory evidence of compliance with the requirements of State laws with respect, *inter alia*, "to bed and banks and to the appropriation, diversion, and use of water for power purposes." This opinion is on the question whether an applicant is required to show title to the site of a proposed project before receiving a license from the Federal Power Commission, or whether section 9 (b) of the act is satisfied if the applicant submits such evidence as the State under its own laws requires to be submitted as a condition precedent to obtaining such rights as the State may grant. The chief counsel holds that section 9 (b) of the act has reference to such requirements as the laws of the State impose with reference to the diversion of water, etc., and that the Commission

\* See Decisions of the Commission, p. 224.

is not required to determine before issuing a license that the licensee is owner of the site of the power plant. The executive secretary stated that this opinion has received the preliminary approval of the Secretaries of War and Agriculture and the First Assistant Secretary of the Interior. The opinion was approved by the Commission.

The executive secretary presented nine applications for license and seven applications for preliminary permit, upon which action was taken as follows:

#### *Licenses.*

1. In the matter of the application of the Alaska Endicott Mining & Milling Co., of Tacoma, Wash. (project No. 63), for a license for a power project on the Beardslee River and on lands of the United States within the Juneau recording district, Alaska, said company having submitted satisfactory evidence of its compliance with the laws of the Territory of Alaska as required by section 9, subsection (b), of the Federal Water Power Act, and of its ability to finance the construction of the project works proposed, notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality, the map and plans of the proposed project works having been approved by the Commission, and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

2. In the matter of the application of the Central Arizona Light & Power Co., of Arizona (project No. 150), for a license for a transmission line and appurtenant structures on and across lands of the United States in Yavapai and Maricopa Counties, Ariz., and partly within the Prescott National Forest, action was taken as follows:

Said line and structures having been acquired by the applicant from the Pacific Gas & Electric Co., and license therefor in the name of said Pacific Gas & Electric Co. having been authorized by the Commission on July 11, 1921; the applicant having submitted satisfactory evidence of its compliance with the laws of the State of Arizona, as required by section 9, subsection (b) of the Federal Water Power Act; and the Commission having reaffirmed its findings of July 11, 1921, with respect to said transmission line and appurtenant structures and its approval of the maps, plans, and specifications thereof; it was voted that issuance of license of the Central Arizona Light & Power Co. be authorized under the conditions and for the period for which authorization on behalf of the Pacific Gas & Electric Co. was approved on July 11, 1921.

3. In the matter of the application of the George Inlet Packing Co. (project No. 206) for a license for a constructed power project on Beaver Falls Creek and on lands of the United States within the Tongass National Forest, Alaska; the Commission having found that said project constitutes a complete power project of less than 100 horsepower and having under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the Territory of Alaska, as required by section 9, subsection (b) of said act; and the Commission finding that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired;



it was voted that license be issued for a period of 10 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of section 10, subsection (i), of said act, and subject also to the following special conditions, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Tongass National Forest.

(1) In order that the project for which license is hereby granted shall conform to a scheme of development that will make the fullest practicable utilization of the water storage possibilities and head at Beaver Falls Creek, the Commission may in its discretion grant a license for further power development on said stream.

(2) The licensee to be limited to a diversion from Beaver Falls Creek of 10 cubic feet per second of water, said amount being the approximate capacity of the existing works. In case license for a more complete development of the stream is granted, such license to contain a provision safeguarding the right to divert the said 10 cubic feet per second of water except when the natural flow of the stream falls below such amount: *Provided*, That should an applicant for a license for a more complete development so elect, he may be required in lieu of releasing said 10 cubic feet per second of water to flow down Beaver Falls Creek to furnish said George Inlet Packing Co. free of charge at the present plant of said company 90 electrical horsepower or such part thereof as the said company may demand; and, in addition, to release at the outlet of Lower Silvis or Beaver Lake sufficient water to provide one-half cubic foot per second of water at the present diversion dam of the said company on Beaver Falls Creek.

4. In the matter of the application of J. H. Cann (project No. 213) for a license for a constructed power project on Cann Creek and on lands of the United States within the Tongass National Forest, Alaska, the Commission having found that said project constitutes a complete power project of less than 100 horsepower capacity, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the Territory of Alaska, as required by section 9, subsection (b) of said act; the map thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and subject also to such conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Tongass National Forest.

5. In the matter of the application of the Blue Mountain Irrigation Co. (project No. 236) for a license for a constructed power project on Pole Canyon Creek and on lands of the United States partly within the La Sal National Forest, San Juan County, Utah; the Commission having found that said power project constitutes a complete project of not more than 100 horsepower capacity, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Utah as

required by section 9, subsection (b) of said act; the map thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1) of said act, and subject also to such conditions; if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said La Sal National Forest.

6. In the matter of the application of the Freshwater Bay Lumber Co. (Inc.) (project No. 241) for a license for a power project on lands of the United States within the Tongass National Forest, Alaska; the Commission having found that said project constitutes a complete project of not more than 100 horsepower capacity, and having, under the authority of section 10, subsection (1) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the Territory of Alaska, as required by section 9, subsection (b) of said act; the map and plans thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1) of said act, subject also to the special condition that the licensee before the completion of construction as required in the license shall construct, and shall thereafter maintain a fishway over the said dam in a manner satisfactory to the Secretary of Commerce, and subject also to such conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Tongass National Forest.

7. In the matter of the application of the Darwin Silver Co. (project No. 245) for a license for a transmission line and appurtenant structures on and across lands of the United States in Inyo County, Calif.; the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b) of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 25 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1) of said act, and subject also to the special condition that, subject to the provisions of section 13 of the act, the licensee shall begin the construction of said project works on or before January 1, 1923, shall thereafter in good faith and with due diligence prosecute such construction, and shall complete the same on or before June 30, 1923.

8. In the matter of the application of the San Joaquin Light and Power Corporation of Fresno, Calif. (project No. 96), for a license for a power project on the San Joaquin River and on lands of the United States partly within the Sierra National Forest, Fresno and Madera Counties, Calif.; said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of the Federal Water Power Act; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the project works having been approved by the Commission; and the Commission finding that said project is best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special condition, and subject also to such conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Sierra National Forest.

(1) Unless otherwise mutually agreed, the fair value, as of the date of issuance of license, of the project heretofore constructed, for which license is to be issued, and as described therein, to be taken to be the actual legitimate cost of such project determined under the uniform classification of accounts for electric corporations prescribed by the Railroad Commission of California and in effect during the period of construction of said project: *Provided*, That the licensee shall transfer and assign to the project accounts such portion of the balances carried as of the date of license in its reserve accounts for depreciation, retirement, or renewals of its property as can be definitely assigned to or may be equitably allocated to the project.

9. In the matter of the application of the El Dorado Power Co., of San Francisco, Calif. (project No. 184), for a license for a power project on the south fork of the American River, and on lands of the United States partly within the Eldorado National Forest, in Eldorado, Alpine, and Amador Counties, Calif., said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto and to the following special conditions, and subject also to such conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Eldorado National Forest.

(1) Subject to the provisions of section 13 of the act, the licensee to begin the construction of the several separable parts of the project works on or before such dates as may be fixed by the executive secretary acting on behalf of the Commission.

(2) The fair value, as of the date of issuance of license, of the portions of the project heretofore constructed, for which license is to be issued, and as therein described, to be determined as early as practicable in the manner prescribed in section 23 of the act; the licensee to agree to accept for all purposes of the license, of any provisions of the act, and of the rules and regulations of the Commission pursuant thereto, the fair value as determined, whether reached by mutual agreement or by final adjudication by the courts, as the net investment of the licensee in such project as of said date. The portions of the project herein referred to are as follows:

Silver Lake Reservoir as now constructed to 5,000 acre-feet capacity.

El Dorado Ditch as now constructed from the intake to the point of diversion therefrom near the 14-Mile House Tunnel, including the present intake works.

#### *Preliminary permits.*

10. In the matter of the application of W. R. Banks, of Lamar, Mo. (project No. 21), for a preliminary permit and license for a power project on Osage River, involving the construction of three dams, a tunnel, and three power houses; said applicant having submitted satisfactory evidence of his right to perform within said State of Missouri the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project, or in conflict therewith, having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization, for the purposes of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act and the rules and regulations of the Commission pursuant thereto and to the following special conditions:

(1) The permittee to make satisfactory investigations of the stream flow of Osage River and of the foundations for each of the proposed dams and power houses.

(2) The permittee to provide in the development of his plans for the construction and operation of his project works, so that the low-water depths now existing in Osage River, below Warsaw, Mo., shall not be decreased; and to make plans for a lock and appurtenant navigation structures in each of his proposed dams, such locks to be of dimensions similar to those in the United States Government lock at Mile No. 7 on said river.

(3) The permittee shall not unreasonably obstruct the river channel in carrying out the investigations required under permit.

11. In the matter of the application of Maurice D. Leehey (project No. 136) for a preliminary permit and license for a power project on Beaver Falls Creek and at Lake Mahoney on lands of the United States within the Tongass National Forest, Alaska, involving the construction of dams and reservoirs, tunnels, pipe lines and power houses on said creek and lake, and a transmission line extending to the town of Saxman, Alaska; said applicant having submitted satisfactory evidence of his right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of his ability to finance the preliminary work of the proposed project, notice of said applica-

tion having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that a preliminary permit be issued for a period of two years, subject to the provisions of said act and the rules and regulations of the Commission pursuant thereto and to the following special conditions:

(1) The permittee to file application for license on or before September 30, 1923.

(2) The permittee to make satisfactory investigation of stream flow and of the foundations of proposed dams and power houses.

(3) The permittee to begin the necessary surveys on or before such date as the district forester, Forest Service, Juneau, Alaska, shall specify, and thereafter to prosecute such surveys to the satisfaction of said district forester.

(4) License, if issued, to contain a provision requiring that the operation of said project shall not interfere materially with the operation of the existing installation of the George Inlet Packing Co.: *Provided*, That should the permittee so elect he may, in lieu of releasing 10 cubic feet per second of water to flow down Beaver Falls Creek for the use of the George Inlet Packing Co., furnish the latter free of charge, at its existing plant, 90 electrical horsepower, or such part thereof as the latter may demand, and, in addition, release at his dam at the outlet of Lower Silvis or Beaver Lake sufficient water to provide one-half cubic foot per second at the existing diversion dam of said George Inlet Packing Co. on Beaver Falls Creek.

12. In the matter of the application of the Alaska Development & Mineral Co. of New York, N. Y. (project No. 157), for a preliminary permit and license for a power project on Tyee and Anan Creek and on lands of the United States within the Tongass National Forest, Alaska, involving the construction of dams and reservoirs, conduits, and power houses on said creeks, and a transmission line connecting said power houses; said company having submitted satisfactory evidence of its right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special condition:

(1) License will not be issued unless the permittee shall have arranged with the Forest Service for a timber supply for its proposed pulp mill.

13. In the matter of the application of James F. Myser and Edward E. Drach (project No. 163), for a preliminary permit and license for a power project on Frying Pan Creek and on lands of the United States partly within

the Holy Cross and Sopris National Forests, in Pitkin and Eagle Counties, Colo., involving the construction of nine dams, nine conduits, and five power houses; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

14. In the matter of the application of the Hirst Chichagof Mining Co., of Seattle, Wash. (project No. 212), for a preliminary permit and license for a power project on an unnamed creek tributary to the head of Didrickson Bay, and on lands of the United States within the Tongass National Forest, on Chichagof Island, Alaska, involving the construction of a dam, reservoir, conduit and power house; said company having submitted satisfactory evidence of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

15. In the matter of the application of the city of Boise, Idaho (project No. 159), for a preliminary permit and license for a power project on the north and south forks of Payette River on lands of the United States partly within the Payette National Forest, in Boise County, Idaho, involving the construction of diversion dams and conduits and a power house; said municipality having submitted satisfactory evidence of its right to perform within said State of Idaho the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, and full opportunity having been given for all interested parties to be heard; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of 18 months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto and to the following special condition:

(1) If license is issued, to be for a period of 50 years, and may contain a special provision which will reserve to the United States the right to regulate the discharge from the reservoirs to the extent necessary to protect irrigation

rights on the lower river, particularly during periods of low flow in the irrigation season, the extent and character of such regulation to be more specifically set forth in the license.

16. In the matter of the applications of the City of St. Paul (project No. 232), of the Northern States Power Co. (project No. 239), and of the City of Minneapolis (project No. 242), for preliminary permits for a power project on the Mississippi River, a navigable waterway of the United States, at the Government's Twin Cities Lock and Dam, and upon lands of the United States adjoining and pertaining to said dam; the Commission being of the opinion that the people of the two municipalities should be the principal beneficiaries from the large savings that would result from the development of this power, and considering it the duty as well as the right of these municipalities to reach a mutual agreement upon the manner in which the power may best be developed and used for their benefit; voted to defer action temporarily in order that such an agreement might be reached and a program for use of the power which would be satisfactory to both municipalities might be presented for the further consideration of the Commission.

#### *Declarations of intention.*

The executive secretary presented four declarations of intention under section 23 of the Federal Water Power Act, upon which action was taken as follows:

1. In the matter of the declaration of intention by the Georgia-Alabama Power Co. to develop a power project on Flint River at Porter Shoals, in Dougherty County, Ga., the Federal Power Commission, having caused the matter to be investigated, and it appearing from the report of such investigation that the stretch of Flint River between Warwick and Albany has actually been navigated in the past by one or more steamers, and that it has been improved by the United States as a navigable stream, it was voted that the Commission finds that Flint River is a navigable water within the definition of such waters in the Federal Water Power Act.

2. In the matter of the declaration of intention of the Dix River Power Co., a Kentucky corporation, to construct a dam across Dix River in Mercer and Garrard Counties, Ky., at a point approximately 2 miles above its junction with Kentucky River, the Commission having caused the case to be investigated, and it appearing from such investigation that the proposed dam is above the navigable portion of Dix River, and that the construction thereof will in no way affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce will not be affected by the proposed construction.

3. In the matter of the declaration of intention by the River Falls Power Co. to construct a dam or other project works on Conecuh River at Gantt mill site, Gantt, Covington County, Ala., at a location 5 or 6 miles above the mouth of Patsaliga Creek, the Commission having caused the matter to be investigated and it appearing from such investigation that the proposed dam or project works will not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce will not be affected by the proposed construction.

4. In the matter of the declaration of intention by the Houston Power Co., of Newton, Ala., to construct a power project on Choctawhatchee River in sec. 1, T. 4 N., R. 24 E., St. Stevens meridian, the Commission having caused the matter to be investigated and it appearing from the report of such investigation that the alteration in the flow of the Choctawhatchee River, which would be

caused by the proposed construction, would affect the navigable capacity of the Choctawhatchee River, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

*Restorations to entry.*

The executive secretary submitted recommendations for determinations under section 24 of the Federal Water Power Act in 18 cases, upon which action was taken as follows:

1. The Geological Survey, having filed a recommendation (E. Power Reserves, Colorado, DA-8) in pursuance of an application from Tony Watzling, of Almont, Colo., for a determination with respect to the following lands adjacent to Gunnison River, Colo.:

New Mexico meridian, Colorado:

T. 51 N., R. 1 E., sec. 22, SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 27, NW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , E.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the following lands:

New Mexico meridian, Colorado:

T. 51 N., R. 1 E., sec. 22, SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 27, NW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), but that it is unable to determine that the value of the remainder of the lands applied for will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920.

2. Allen J. Hale, of Grand View, Idaho, having filed an application (E. Power Reserves, Idaho, DA-13) for a determination to be made with respect to the following-described lands, 6 acres in area:

Boise meridian, Idaho:

All portions of the following lands lying within 50 feet of the center line of the right of way for transmission line shown on a map entitled "Map to Accompany Application of the Great Shoshone and Twin Falls Water Power Company for Right of Way for Electric Transmission Line," designated as "Exhibit J" (4) and filed in the General Land Office (Boise 015827):

T. 5 S., R. 4 E., sec. 27, lots 6, 7, and 8; sec. 34, lot 5, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. Thomas J. Stroud, of Salmon, Idaho, having filed an application (E. Power Reserves, Idaho, DA-1), for a determination to be made with respect to the following-described lands, 256.06 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 19 N., R. 21 E., sec. 1, SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , E.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 11, lots 6 and 7, sec. 12, NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).



4. Joseph F. Black, care of Fred Crandall, Lemhi County, Salmon, Idaho, having filed an application (E, Power Reserves, Idaho, DA-2) for a determination to be made with respect to the following-described lands, 47.79 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 17 N., R. 21 E., sec. 20, lot 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

5. Richard D. Spellman, of Salmon, Idaho, having filed an application (E, Power Reserves, Idaho, DA-4) for a determination to be made with respect to the following-described lands, 45 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 19 N., R. 21 E., sec. 14, lots 6 and 9,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

6. Clarence M. Pratt, of May, Lemhi County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-5) for a determination to be made with respect to the following-described lands, 32.79 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 17 N., R. 21 E., sec. 20, lot 2,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

7. Kim. Whitsett, of May, Lemhi County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-6) for a determination to be made with respect to the following-described lands, 136.43 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 17 N., R. 21 E., sec. 29, lot 8; sec. 32, SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , lots 2 and 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

8. Frank G. Hussey, of Salmon, Idaho, having filed an application (E, Power Reserves, Idaho, DA-7) for a determination to be made with respect to the following-described lands, 153.6 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 18 N., R. 21 E., sec. 15, lots 2, 3, 4, and 8,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

9. Edward S. Popejoy, of May, Lemhi County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-8) for a determination to be made with

respect to the following-described lands, 109.85 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 16 N., R. 20 E., sec. 24, lots 2, 3, 6 and 7,

and the facts with respect thereto having been presented by the executive secretary it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

10. David Lambeth, of May, Lemhi County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-11) for a determination to be made with respect to the following-described lands, 71.93 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 18 N., R. 21 E., sec. 9, lots 2 and 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

11. Alice Edwards, of Salmon, Idaho, having filed an application (E, Power Reserves, Idaho, DA-15) for a determination to be made with respect to the following described lands, 180.67 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 17 N., R. 21 E., sec. 9, lots 1, 4 and 5, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

12. Frank H. Oster, of Challis, Idaho, having filed an application (E, Power Reserves, Idaho, DA-19) for a determination to be made with respect to the following-described lands, 112.40 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 11 N., R. 17 E., sec. 30, lots 3, 4, and 5,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

13. Lee L. Baxter, of Challis, Idaho, having filed an application (E, Power Reserves, Idaho, DA-22) for a determination to be made with respect to the following-described lands, 56.03 acres in area, near Salmon River:

Boise meridian, Idaho:

T. 15 N., R. 19 E., sec. 24, lots 6 and 9,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Act, approved June 10, 1920 (41 Stat., 1063).

14. The executive secretary presented the facts with respect to the reservation of certain lands as designated below under the provisions of section 24 of the Federal Water Power Act and recommended that a determination be made

with respect thereto as provided by the said section 24. The land is 345 acres in area and is located in the State of Montana.

(1) Land as described in letter of January 29, 1921 (E, Projects, Montana, No. 80, Amazon Dixie Mining Co.), addressed to the Commissioner of the General Land Office, giving notice that the said lands were included in a power project for which application had been filed by the Amazon Dixie Mining Co., Wallace, Idaho, the date of filing thereof being November 1, 1920;

(2) Lands as described in letter of January 31, 1921 (E, Projects, Montana, No. 107, Butte-Jardine Metals Mines Co.), addressed to the Commissioner of the General Land Office, giving notice that the said lands were included in a power project for which application had been filed by the Butte-Jardine Metals Mines Co., Butte, Mont., the date of filing thereof being November 30, 1920;

(3) Lands as described in letter of July 16, 1921 (E, Projects, Montana, No. 198, Boston & Montana Milling & Power Co.), addressed to the Commissioner of the General Land Office, giving notice that the said lands were included in a power project for which application had been filed by the Boston & Montana Milling & Power Co., Butte, Mont., the date of filing thereof being July 1, 1921.

It was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

15. Nicholas Vanderhoof, care of A. C. Shaw, of 619 Yeon Building, Portland, Oreg., having filed an application (E, Power Reserves, Oregon, DA-1) for a determination to be made with respect to the following-described lands, 122.99 acres in area, near Sandy River:

Willamette meridian, Oregon:

T. 2 S., R. 6 E., sec. 19, SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , lots 2 and 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

16. Roscoe C. Adams, of Service Creek, Oreg., having filed an application (E, Power Reserves, Oregon, DA-21) for a determination to be made with respect to the following-described lands, 158.55 acres in area, adjacent to John Day River:

Willamette meridian, Oregon:

T. 9 S., R. 24 E., sec. 6, lots 1, 2, and N.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection, under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

17. Frank Loonen, of The Dalles, Oreg., having filed an application (E, Power Reserves, Oregon, DA-22) for a determination to be made with respect to the following-described lands, 169.2 acres in area, near the Deschutes River:

Willamette meridian, Oregon:

T. 2 S., R. 15 E., sec. 13, NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; T. 2 S., R. 16 E., sec. 7, lots 2 and 3; sec. 18, lot 2,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission is unable to determine that the value of the said lands will not be injured or destroyed for the purposes of power

development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

18. The General Land Office, having filed an application (E, Power Reserves, Wyoming, DA-9) for a determination to be made with respect to the following-described lands, 7.7 acres in area:

Sixth principal meridian:

All portions of the following lands lying within 50 feet of the center line of the right of way on a detailed map entitled "Filling Map Liberty Potash Company, Power Transmission Line from Rock Springs Fuel Company to the Company's Quarry," and filed in the local land office at Evanston, Wyo., January 8, 1920.

T. 21 N., R. 102 W., sec. 22, NW.  $\frac{1}{4}$ , NW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

The executive secretary submitted a report of the board appointed to investigate and report upon the situation with regard to irrigation and power possibilities of the Deschutes River, and recommended that the Commission have the report printed as a public document of the Commission. This recommendation was approved by the Commission.

The meeting adjourned at 5 p. m.

O. C. MERRILL, *Executive Secretary.*

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THIRTY-FIRST MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR ON  
MARCH 27, 1922.

Meeting called to order at 4.12 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of January 24, 1922, was approved.

The executive secretary presented a list of 14 applications, Nos. 276 to 289, inclusive, received since the meeting of January 24, 1922.

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The executive secretary stated that 10 projects had been advertised since the meeting of January 24, 1922, and that 3 declarations of intention had been filed.

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*Alteration of plans, Niagara Falls Power Co.*

The executive secretary submitted the application of the Niagara Falls Power Co., Niagara Falls, N. Y., for approval of alterations in the plan of development authorized by its license of March 3, 1921, for project No. 16, by the substitution of three hydroelectric units each of 70,000 horsepower capacity, and one forebay, for five units each of 37,500 horsepower capacity, and two forebays, explaining the advantages of the proposed changes. The following action was taken by the Commission:

In the matter of the application of the Niagara Falls Power Co., of Niagara Falls, N. Y., for amendment of the license issued to that company by the

Federal Power Commission, March 3, 1921, by the substitution of three hydro-electric units, each of about 70,000 horsepower capacity, and one forebay, for five units, each of about 37,500 horsepower capacity, and two forebays, as indicated on the original plans, the one forebay to be on the easterly side of the hydraulic basin; it appearing to the Commission that the proposed changes in plans are changes in detail only and will not involve any substantial alteration or addition to the general plan of development, that they will not involve any change in the amount of water to be diverted from the river above the Falls, and that their effect will be to simplify the operation of the project plant and ultimately result in an increased economy more than justifying the additional cost; it was voted by the Commission that it finds that in view of the character of the changes no advertisement of the proposed amendment of the license is required by the Federal Water Power Act, and that an instrument be issued amending the license by the substitution of the exhibits showing the amendments herein authorized for the corresponding exhibits of the original license; and authorizing the substitution for the six circuits of the Riverside Avenue transmission line from hydraulic plant, station No. 3 extension to Echota substation, of the number of circuits of such size and material as may be necessary economically and efficiently to transmit power from said hydraulic plant to said Echota substation.

#### *Licenses.*

The executive secretary presented three applications for license, upon which action was taken as follows:

1. In the matter of the application of the San Joaquin Light and Power Corporation, Fresno, Calif. (project No. 175), for a license for a power project on the North and West Forks of Kings River and on lands of the United States within the Sierra National Forest, Fresno County, Calif.; said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of the Federal Water Power Act, except as specified in the following special conditions, and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special conditions and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Sierra National Forest:

(a) The license shall not become effective with respect to the following separable parts of the project works until the licensee has complied with the requirements of the laws of the State of California with respect to the appropriation, diversion and storage of water contemplated in the development of said separable parts:

1. Wishon Dam, Reservoirs and Power Plant.
2. Meyer Dam and Reservoir.

3. Peart Dam, Reservoir and Power Plant.
4. Rancheria Creek Diversion Dam and Tunnel.
5. Bear Creek Diversion Dam and Canal.

(b) Subject to the provisions of section 13 of the act, the licensee shall begin the construction of the several parts of said project works on or before such dates as the executive secretary, acting on behalf of the Commission, may fix.

(c) If and when the necessary diversion and storage permits are secured by the licensee from the Department of Public Works, State of California, the construction of Wishon Dam, Reservoirs, and Power Plant; Meyer Dam and Reservoirs; Peart Dam, Reservoir, and Power Plant; Rancheria Creek Diversion Dam and Tunnel; and Bear Creek Diversion Dam and Canal shall be undertaken and completed at such times as may be necessary to meet the reasonable market demands in the territory served by the licensee.

The executive secretary presented the following statement concerning the application of the Wyoming Power Co. (project No. 149) and the conflicting application of John T. Clarke (project No. 221) for power development at Boysen Dam, on the Big Horn River, Wyo.

Protest has been made by John T. Clarke et al. against the issue of a license to the Wyoming Power Co. for power development at Boysen Dam, on the Big Horn River, Wyo. This dam was constructed by the Big Horn Power Co. and placed in operation in 1913, lighting the town of Shoshoni, Wyo. The reservoir and dam occupy, in part, lands of the United States without authority from the Federal Government. The protest is made on the ground that the title to the site of the dam is in the protestants and that a license can not be issued to the applicant company without adversely affecting the rights of the protestants.

The dam, which contains the power plant and the machinery for the generation of electricity, and the reservoir, are located, in part, on lot 1, and the reservoir created by the dam is located, in part, on lots 1 and 7, sec. 4, T. 5 N., R. 6 E., W. R. M., Fremont County, Wyo. These lots, with others, were patented to Asmus Boysen May 17, 1907; conveyed May 19, 1907, to "The Asmus Boysen Mining Co."; and conveyed November 16, 1907, to "The Big Horn Power Company," reserving minerals to the Asmus Boysen Mining Co. Subsequently, the dam was charged with a mechanic's lien in favor of the Shoshoni Lumber Co., which company brought suit to enforce said lien, and judgment was entered September 11, 1915, directing the sale of the dam (Civil file 1372, district court, sixth judicial district, Wyoming). This judgment was assigned to Allen Boysen, a deed given to Allen Boysen January 31, 1916, and he conveyed the dam, without attempting to convey the land upon which it is situated, to the Wyoming Power Co. No evidence has been submitted by the Wyoming Power Co. of ownership of the site of the dam.

The situation of this matter may be briefly described as follows: The Wyoming Power Co. is in possession of the dam, and claims title thereto under the deed issued under the mechanic's lien referred to above. It holds a permit from the State engineer covering the appropriation of the waters of this stream for power purposes. The title to the site of the dam has been in litigation for many years and there appears to be no prospect for an early settlement of the litigation. The Wyoming Power Co. is in trespass on Government land and the trespass should be terminated at the earliest practicable date. Moreover, it appears that the existence of the dam threatens the safety of the railroad located on the west bank of the stream. In order to protect the railroad it has been requested that a license be issued by the Federal Power Commission to construct a tunnel from a point above the dam to a point

below the dam through Government land on the east side of the dam, which plan will be acceptable to the railroad company as furnishing the required safety for the railroad. This tunnel should be constructed at the earliest date practicable.

In view of the situation it is recommended that the Commission authorize the issuance of a license on the application of the Wyoming Power Co., at the same time denying a license on the cross application of John T. Clarke et al. In submitting this recommendation no attempt has been made to determine the ownership of the site of the dam. Indeed, the title appears to be so involved in litigation that a satisfactory decision as to ownership of the land can not be made until the conclusion of the proceedings now pending. It is simply proposed to give the license to the party in possession of the power project, which party has submitted the required evidence of compliance with the requirements of section 9, subsection (b), of the Federal Water Power Act. If, as claimed by John T. Clarke et al., the property and the water rights are charged with a trust in their favor, it would seem that the proposed license would be charged with the same trust.

Messrs. Vogelsang, Brown, Cram, and Lange, attorneys for John T. Clarke, have filed a request for a delay of 60 days before acting on the application of the Wyoming Power Co. to give Mr. Clarke and his associates time to institute proceedings to recover possession of the lands and the power structures thereon. In any event, they ask that the Commission do not issue a license to the Wyoming Power Co. without giving them an opportunity for an oral hearing before the Commission. Both Mr. Clarke and his attorneys have been given ample opportunity to present to the staff of the Commission all data and arguments in support of their case, and Mr. Clarke has had ample time to recover possession of the property. All that could be accomplished by a further hearing would be to secure a typewritten record which would contain a repetition of matters already presented relating to the details of the contest which is now before the United States District Court for Wyoming for settlement. It is my opinion that any further hearing upon this matter is unnecessary, and I do not recommend that the request for delay be granted.

Upon consideration of the matter the Commission took the following action:

2. In the matter of the application of the Wyoming Power Co., of Shoshoni, Wyo. (project No. 149), for a license for an existing power project on the Big Horn River and on lands of the United States in Fremont County, Wyo.; said company having submitted satisfactory evidence of its compliance with the laws of the State of Wyoming as required by section 9, subsection (b), of the Federal Water Power Act; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and the commission finding that license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that, without passing upon the conflicting claims as to ownership of the property involved and without prejudice to the claims of John T. Clarke et al., that the water rights and the project works are charged with a trust in their favor, license be issued for a period of 50 years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto.

3. It was further voted that the conflicting application of John T. Clarke (project No. 221) for the aforementioned project be denied and that no further hearing be granted.

*Extension of preliminary permit.*

The executive secretary presented the following statement concerning the application for extension of the preliminary permit of the Hydraulic Race Co. (project No. 15) :

The Hydraulic Race Co., of Lockport, N. Y., has formally requested an extension of time on its preliminary permit for a period of two years from the date of expiration of the permit on March 3, 1922. The permittee's request is based on inability to secure State authority for the transportation of water through the Barge Canal and of its release therefrom into the canals at Lockport. It appears that there has been a divided jurisdiction between the superintendent of public works and the New York State Water Power Commission relative to surplus water in the Barge Canal, which has only recently been settled by new State legislation. In the meantime it has been impossible for the permittee to comply with the provisions of article 5 of the preliminary permit, which requires evidence of State authority to transport water through the Barge Canal.

Aside from the above failure to comply with the terms of the permit, for which the permittee is not responsible, the permittee has made no apparent effort to comply with the other conditions of its permit.

Article 3 requires submission of plans and specifications for project works capable of developing 25 horsepower per cubic foot of water. No such plans and specifications have been submitted.

Article 4 requires the permittee to submit evidence of financial ability to carry out the project. No such evidence has been submitted.

Article 6 requires the permittee to submit a statement of the amount paid to the State of New York for transportation of water for power purposes through the Barge Canal. Only an indefinite statement has been submitted to the effect that the permittee has made no payment directly to the State of New York, but that, as a member of the Newfane Mill Owners' Association, contributions have been made amounting, in all to approximately \$30,000. These payments are based on a charge of \$7,500 per year for transportation of 500 cubic feet a second, with proportional reduction when the amount transported is less. The statement submitted, to be of any use, should be itemized at least by years, and should be accompanied by some statement as to the source from which derived and the probable reliability of the information.

Article 7 requires the permittee to submit records of the amount of water discharged from the Erie Canal and the Barge Canal into canals of the permittee. The permittee has submitted no such records, but refers the Commission to the superintendent of public works of the State of New York. Two requests have been made on the superintendent of public works for these data, but none have been furnished.

Article 9 requires the permittee to submit copies of contracts, leases, or other rights for the use of water for power purposes from the canals of the permittee. No such evidence has been submitted, and no records have been submitted of the water furnished under said contracts.

Article 10 requires the submission of a statement of agreements made with parties who are to use the 500 second-feet of water after it leaves the permittee's works at Lockport. No such statement has been submitted. Great difficulty has been encountered in getting reliable information as to the projects of the permittee. Permit was granted on the assumption that equities might have been built up which should be recognized by the United States as a result of the temporary permits issued by the Secretary of War during the period of 1906 to 1917. Most of the conditions mentioned above were inserted in



the permit for the purpose of requiring the permittee to produce the facts necessary to determine what equities, if any, it had acquired.

The best information available at the present time on water used in the old Erie Canal and in the new Barge Canal is contained in a report of Colonel Warren, "Diversion of Water from Great Lakes to the Niagara River." This report shows that the Barge Canal is normally closed for navigation from December 22 to May 1. It quotes from a report by State engineer of New York, dated February, 1911, as follows:

"The average water requirement of the old Erie Canal was about 700 cubic feet per second diverted from Lake Erie. About 100 cubic feet per second was used for lockage at Lockport, leaving about 600 cubic feet per second to be by-passed for power at Lockport. About 108 cubic feet per second was discharged from the canal for power at Medina, and about 111 cubic feet per second at Albion. An additional quantity of water, averaging 233 cubic feet per second was diverted from Lake Erie for power at Lockport and was then discharged into Eighteen Mile Creek for the power plants on that creek."

The original estimate of water required to be taken from Niagara River for the Barge Canal was 1,237 cubic feet per second, which included about 530 cubic feet per second for power for industrial and agricultural uses. Since the above original estimate was made, the canal prism has been enlarged so that now 1,237 cubic feet per second are estimated as necessary for navigation alone. It is calculated that this amount will give a flow of 967 cubic feet per second past Medina and 606 cubic feet per second at Genesee River. The capacity of the Barge Canal from Tonawanda to Lockport, when 12-foot depth is maintained, varies with the level of the lake from about 1,200 cubic feet per second to 2,700 cubic feet per second, being about 2,000 cubic feet per second for mean lake level. The maximum capacity from Lockport to Medina, when 12-foot depth is maintained, has been calculated to be 1,600 cubic feet per second. The estimated requirements for lockage at Lockport is 100 cubic feet per second. Colonel Warren gives the following information with respect to water furnished the Hydraulic Race Co.:

The south tunnel and canal of the company has carried a flow varying from nothing to 773 cubic feet per second. The north tunnel of the Hydraulic Race Co. in 1917 had a measured flow of 407 cubic feet per second. Since that time the removal of the Tonawanda dam in the canal has lowered the water level in the canal at Lockport so as to reduce the capacity of the north tunnel by about 200 cubic feet per second. The New York Box Board & Paper Co., which used the north tunnel, burned down three or four years ago and the north tunnel has not been used since. From the above it appears that the maximum ever used by the Hydraulic Race Co. was about 1,108 cubic feet per second, and the maximum that can be passed through its channel at present is 980 cubic feet per second. If the Hydraulic Race Co. gets a license, it is understood that it intends to use the 500 cubic feet per second by enlarging the north tunnel and installing a hydroelectric plant thereon. From the above figures it appears that the normal flow required in the new Barge Canal for navigation can furnish the Hydraulic Race Co. the maximum amount of water that it has ever heretofore had either under old Erie Canal conditions or new Barge Canal conditions.

In view of the above, it seems doubtful whether the permittee has any equities which can not be fully taken care of by the State from water used for navigation purposes. The 500 cubic feet per second in question can be more economically used for power development at Niagara Falls than through the Barge Canal, and no license should be issued the Hydraulic Race Co. unless it is clearly necessary to meet equities resulting from the temporary permits here-

tofore granted by the War Department. However, in fairness to the permittee, the permit should be extended long enough to permit the State of New York to determine its policy with respect to transporting water for power purposes through the Barge Canal. It is believed that four months' extension is long enough for this purpose.

After consideration and discussion the Commission took the following action:

In the matter of the application of the Hydraulic Race Co., of Lockport, N. Y. (project No. 15), for an extension from March 3, 1922, to March 3, 1923, of the period of the preliminary permit issued to said company on March 3, 1921, for the diversion of water from Niagara River through the Barge Canal and for the use of such water for power purposes at or near the city of Lockport and along 18-mile and/or Oak Orchard Creek, Niagara and Orleans Counties, N. Y.; such extension being desired to enable the permittee to secure from the State of New York authority to transport through the Barge Canal 500 cubic feet per second of water; it appearing that an extension of six months would be reasonable and necessary for the purpose stated, it was voted that the period of said preliminary permit be extended to September 5, 1922.

#### *Preliminary permits.*

The executive secretary presented 11 applications for preliminary permit, upon which action was taken as follows:

1. In the matter of the application of Mr. L. J. Vogter, of 3567 East B Street, Tacoma, Wash. (project No. 60), for a preliminary permit to develop power at Swan Lake and Fish Creek, in the Tongass National Forest, Alaska, the applicant having failed, after notice, to make a sufficient showing as to his experience and his financial ability to carry out his proposed project, it was voted that the application be denied.

2. In the matter of the application of the Wrangell Pulp & Paper Co., of Wrangell, Alaska (project No. 61), for a preliminary permit and license for a power project on Harding and Grant Creeks and on lands of the United States within the Tongass National Forest, Alaska, involving the construction of two dams, two conduits, and two power houses, said company having submitted satisfactory evidence of its right to perform within said Territory of Alaska the acts necessary for the purposes of such permit; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to a special condition requiring the permittee, as a condition precedent to the issuance of license, to make satisfactory arrangements with the Forest Service for the timber to be manufactured into pulp or paper through the use of the power generated by the said project.

3. In the matter of the application of Messrs. Lincoln Wain and W. T. Young (project No. 162), for a preliminary permit for a power project on Power Creek, near Cordova, Alaska, in the Chugach National Forest, the Commission having

found that the application is in conflict with an application filed by the Alaska Public Utilities and that the latter company is better prepared to make this development, it was voted that the application of Messrs. Wain and Young be rejected.

4. In the matter of the application of the Alaska Public Utilities, of Cordova, Alaska (project No. 160), for a preliminary permit and license for a power project on Power Creek and on lands of the United States within the Chugach National Forest, Alaska, involving the construction of a diversion dam, a conduit, tunnel and pipe line, a power house, and a transmission line to the town of Cordova; said company having submitted satisfactory evidence of its rights to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in any conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization, for the purposes of water-power development and of other beneficial public uses; it was voted that a preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that the permittee shall make satisfactory investigations of the stream flow of Power Creek, such investigations to include a study of the possibilities of the development of storage on said creek, for the purpose of obtaining a regulated flow of the same.

5. In the matter of the application of the Dixie Power Co. of St. Louis, Mo. (project No. 214), for a preliminary permit and license for a power project on the north fork of White River, a navigable waterway of the United States, in Baxter County, Ark., and in Ozark and Douglas counties, Mo., involving the construction of a dam 200 to 300 feet high, with a power house at the dam, to be located near the mouth of the north fork of White River; said company having submitted satisfactory evidence of its right to perform within said States of Arkansas and Missouri the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that license, if issued, will contain a provision requiring the licensee so to operate its project works as not unreasonably to interfere with the interests of navigation lower down the river.

6. In the matter of the application of John H. Hughes, of San Francisco, Calif. (project No. 261), for a preliminary permit and license for a power project on French Creek and on lands of the United States within the Plumas National Forest, in Butte County, Calif., involving the construction of a diversion dam, a conduit approximately 1.8 miles in length, and a power house; said company

having submitted satisfactory evidence of its right to perform within said State of California the acts necessary for the purposes of such permit; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of 18 months, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

7. In the matter of the application of Benjamin H. Hardaway, of Columbus, Ga. (project No. 262), for a preliminary permit and license for a power project on Choctawhatchee River, a navigable waterway of the United States, in Geneva County, Ala., involving the construction of a dam approximately 25 feet high and the construction of a power house at a point in Choctawhatchee River, just above Geneva, Ala.; said applicant having submitted satisfactory evidence of his right to perform within said State of Alabama the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization, for the purposes of navigation, of water-power development, and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall so prepare the plans for his dam as to make possible the construction by the United States at some future date of a lock and appurtenant navigation facilities at said dam, the general dimensions of such lock to be in accordance with instructions from the United States district engineer at Montgomery, Ala.

(b) If and when a license is issued, the licensee shall, unless a smaller amount be authorized by the Secretary of War, allow a minimum discharge past his dam of 750 cubic feet per second at all times, except when the natural discharge at the dam is less than said amount, at which times the discharge shall be not less than the natural discharge.

(c) If and when the United States shall provide for navigation over the section of the river above the proposed dam, the maximum allowable draw-down of the pool shall not exceed 4 feet, unless otherwise authorized by the Secretary of War.

(d) The licensee shall, if and when the river is to be improved by the United States for navigation, transfer without cost to the United States the necessary lands and rights of way for construction of a lock.

(e) The licensee shall furnish, free of cost, the electric power required for the operation of such lock if constructed.

8. In the matter of the application of Benjamin H. Hardaway, of Columbus, Ga. (project No. 266) for a preliminary permit and license for a power project

on Pea River, a navigable waterway of the United States, in Geneva County, Ala., involving the construction of a dam approximately 40 feet high and the construction of a power house at a point in Pea River about 4 miles above Geneva, Ala., said applicant having submitted satisfactory evidence of his right to perform within said State of Alabama the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The licensee shall, unless a smaller amount be authorized by the Secretary of War, allow a minimum discharge past his dam of not less than 750 cubic feet per second, except when the natural discharge of the river at the dam is less than the said amount, at which times he shall permit a discharge not less than the natural discharge.

(b) If the flow of Pea River is diverted to Choctawhatchee River, the licensee shall, unless a smaller amount be authorized by the Secretary of War, allow a discharge past his dam on said Choctawhatchee River of not less than 1,500 cubic feet per second, except that when the combined natural discharge of the two rivers at said dam is less than said amount, he shall allow a discharge not less than the combined natural discharge.

9. In the matter of the application of the city of Oskaloosa, Iowa (project No. 268), for a preliminary permit and license for a power project on the Des Moines River, a navigable waterway of the United States, in Marion County, Iowa, involving the construction of a dam and power house, a levee about 2 miles long, and a dam with floodgates at the head of the old river channel which will be used to by-pass the said power dam; said company having submitted satisfactory evidence of its right to perform within said State of Iowa the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The permittee shall so prepare the plans for its dam as to make possible the construction by the United States at some future date of a lock of chamber dimensions 60 feet by 350 feet, and shall acquire such area of land as may be necessary for such lock and appurtenant structures.

(b) The license, if granted, shall contain a provision requiring the licensee to so operate his project works as not unreasonably to interfere with the interests of navigation and power development in the river below.

10. In the matter of the application of the Caddo River Power & Irrigation Co., of Little Rock, Ark. (project No. 271), for a preliminary permit and license for a power project on Ouachita River, a navigable waterway of the United States, and on lands of the United States partly within the Arkansas National Forest, in Garland County, Ark., involving the construction of three dams and power houses and the creation of a reservoir approximately 72 square miles in area; said company having submitted satisfactory evidence of its right to perform within said State of Arkansas the acts necessary for the purpose of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that license, if issued, shall contain a provision requiring that the licensee so operate its project works as not unreasonably to interfere with navigation lower down the river.

11. In the matter of the application of the Big Horn Canyon Irrigation & Power Co., of Hardin, Mont. (project No. 12), for a preliminary permit and license for a power project on the Big Horn River and on lands of the United States partly within the Crow Indian Reservation, in Carbon and Big Horn Counties, Mont., and Big Horn County, Wyo., involving the construction of a 480-foot dam, an 830,000 acre-foot reservoir, and a 210,000-horsepower power house, approximately, said company having submitted satisfactory evidence of its right to perform within said States of Montana and Wyoming the acts necessary for the purposes of such permit; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality, and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that if license is issued for said proposed project it shall not be construed as affecting in any way any priority to the waters of the Big Horn River or of its tributaries in respect to the Shoshone project of the United States Reclamation Service, or as waiving any rights which the United States might have in respect thereto.

It was further voted that the executive secretary be authorized and instructed, in accordance with paragraph 8 of Orders No. 2 of the Commission, of August 23, 1920, to execute and issue permits or licenses in the several cases, respectively, as thus approved by the Commission and in substantial conformity with the conditions recited.

*Declarations of intention.*

The executive secretary submitted six declarations of intention, upon which action was taken as follows:

1. In the matter of the declaration of intention of the Caddo River Power & Irrigation Co., of Little Rock, Ark., to construct two dams across and in Caddo Creek, a branch of Ouachita River, in Clark County, Ark., the Commission having caused the matter to be investigated and it appearing from the report of such investigation that Caddo Creek is not a navigable water of the United States and that the proposed construction will not affect interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

2. In the matter of the declaration of intention by the Iowa Railway & Light Co., of Cedar Rapids, Iowa, to construct a dam across and in Cedar River at a point about 3 miles above Rochester, Cedar County, Iowa, the commission having caused the matter to be investigated, and it appearing from the report of such investigation that Cedar River is not a navigable water of the United States and that the proposed construction will not affect interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

3. In the matter of the declaration of intention of the Chipola Light & Power Co., of Marianna, Fla., to construct a dam across and in Chipola River in the vicinity of Marianna, Jackson County, Fla., for the purpose of developing power, the Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that a storage reservoir proposed to be constructed in connection with the power development may impound water during the low-water season and therefore be likely to have a detrimental effect on navigation in the river below, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

4. In the matter of the declaration of intention of C. M. Smith, of Rogersville, Tenn., to construct a dam across and in the Holston River at Kirkpatrick Shoals, about 3 miles south of Rogersville, Hawkins County, Tenn., for the purpose of developing power; the Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that Holston River has been under improvement, by authority of Congress, between its mouth and Kingsport, a point about 40 miles upstream from the proposed dam site and that it is, within the meaning of the Federal Water Power Act, a navigable water of the United States, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

5. In the matter of the declaration of intention of the city of Boone, Iowa, to construct a dam across and in Des Moines River in the vicinity of Boone, Boone County, Iowa, for the purpose of developing power; the Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that Des Moines River at the site of the proposed dam is not a navigable water of the United States and that the proposed construction will not affect interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

6. In the matter of the declaration of intention of the Iowa Traction Co., of Cedar Rapids, Iowa, to construct dams across and in Des Moines River in the vicinity of Boone, Boone County, Iowa, for the purpose of developing power;

the Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that the Des Moines River at the sites of the proposed dams is not a navigable water of the United States and that the proposed construction will not affect interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

*Restorations to entry.*

The executive secretary presented a recommendation for the cancellation of the reservation of certain lands of the United States under the provisions of section 24 of the act, upon which action was taken as follows:

In the matter of the application of Messrs. James Hulme, W. E. McKinnon, and Albert H. Piepenburg, of Pine Knot, San Bernardino County, Calif. (E, Projects, No. 227, California), for license for a project involving the construction of a transmission line affecting certain public lands and lands within Angeles National Forest, the executive secretary having brought to the attention of the Commission, among other relevant facts, that notice was duly given to the General Land Office that certain lands of the United States were included in the said project; that under the provisions of section 24 of the Federal Water Power Act the said lands were from June 21, 1921, the date of filing of the said application, reserved from entry, location, or other disposal under the laws of the United States until otherwise directed by the Commission or by Congress; that thereafter the said applicants relinquished to the United States any rights secured under their application, and that the case was closed in the records of the Commission, it was voted that the Commission directs that the reservation of all lands of the United States in the following townships:

San Bernardino meridian, California:

T. 3 N., R. 1 E.; T. 3 N., R. 1 W.; T. 4 N., R. 1 W.,  
made in pursuance of the said application, be canceled.

The executive secretary presented recommendations for determination under section 24 of the act in 17 cases, upon which action was taken as follows:

1. Vincent C. Wilcox, 301 Capital National Bank Building, Sacramento, Calif., having filed an application (E, Power Reserves, California, DA-12) for determination to be made with respect to the following-described lands, 117.28 acres in area, on the south fork of Battle Creek, a tributary of the Sacramento River, namely:

Mount Diablo meridian, California:

T. 29 N., R. 2 E., sec. 18, lot 1, E $\frac{1}{2}$  SE $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act approved June 10, 1920 (41 Stat., 1063).

2. Martha F. Duffes, 1970 Dahlia Street, Denver, Colo., having filed an application (E, Power Reserves, Colorado, DA-18) for a determination to be made with respect to the following-described lands, 40 acres in area, near Williams Fork, a tributary of Colorado River:

Sixth principal meridian, Wyoming:

T. 1 S., R. 78 W., sec. 17, SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power develop-



ment by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. Leonard G. Lang of Westcliffe, Colo., having filed an application (E, Power Reserves, Colorado, DA-17) for a determination to be made with respect to the following-described lands, 80 acres in area, near Grape Creek, a tributary of Arkansas River:

Sixth principal meridian, Colorado:

T. 22 S., R. 73 W., sec. 1, E.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. The Department of Agriculture having filed an application, (E, Power Reserves, Idaho, DA-25) for a determination to be made with respect to the following-described lands, 62.50 acres in area, near Timber Creek, a tributary of Lemhi River:

Boise meridian, Idaho:

T. 15 N., R. 26 E., sec. 31, S.  $\frac{1}{4}$  S.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , E.  $\frac{1}{4}$  NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 32, NW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  S.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

5. Everett Belville, Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-29) for a determination to be made with respect to the following-described lands, 640 acres in area, near Blackfoot River:

Boise meridian, Idaho:

T. 4 S., R. 39 E., sec. 20, N.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 29, E.  $\frac{1}{4}$  W.  $\frac{1}{4}$ , W.  $\frac{1}{4}$  E.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 28, S.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

6. Joseph Miller, Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-28) for a determination to be made with respect to the following-described lands, 520 acres in area, near Blackfoot River, Idaho:

Boise meridian, Idaho:

T. 5 S., R. 40 E., sec. 7, W.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 8, W.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 17, NE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

7. A. R. Strong, Montpelier, Idaho, having filed an application (E, Power Reserves, Idaho, DA-30) for a determination to be made with respect to the following described lands, 40 acres in area, near Slug Creek, a tributary of Blackfoot River:

Boise meridian, Idaho:

T. 8 S., R. 43 E., sec. 3, NW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

8. Clifford Walker, Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-31), for a determination to be made with respect to the following described lands, 320 acres in area, near Blackfoot River:

Boise meridian, Idaho:

T. 4 S., R. 39 E., sec. 27, S.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ ; sec. 28, SW.  $\frac{1}{2}$ , W.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

9. Reuben L. Walker, Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-32) for a determination to be made with respect to the following-described lands, 306.30 acres in area, near Blackfoot River.

Boise meridian, Idaho:

T. 5 S., R. 40 E., sec. 6, lots 5, 6, and 7, E.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ; sec. 7, lot 1; E.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

10. Albert Walker, Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-33) for a determination to be made with respect to the following-described lands, 320 acres in area, near Blackfoot River:

Boise meridian, Idaho:

T. 4 S., R. 39 E., sec. 27, E.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ; sec. 28, SW.  $\frac{1}{2}$ , W.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

11. Ray C. Spencer, of Butte Falls, Jackson County, Oreg., having filed an application (E, Power Reserves, Oregon, DA-20) for a determination to be made with respect to the following-described lands, 80 acres in area, near south fork, Big Butte Creek:

Willamette meridian, Oregon:

T. 35 S., R. 3 E., sec. 21, NW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

12. Robert R. Biddle, 591 West Eleventh Avenue, Eugene, Oreg., having filed an application (E, Power Reserves, Oregon, DA-23) for a determination to be made with respect to the following-described lands, 81.13 acres in area, near McKenzie River:

Willamette meridian, Oregon:

T. 17 S., R. 2 E., sec. 1, lots 3 and 4,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

13. Fred W. Perkins having filed an application (E, Power Reserves, Oregon, DA-27) for a determination to be made with respect to the following-described lands, 178.06 acres in area, on Owyhee River:

Willamette meridian, Oregon:

T. 24 S., R. 44 E., sec. 4, lots 4, 5, 6, and 7; sec. 9, lot 1, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

14. N. J. Nielsen, Hyrum, Utah, having filed an application (E, Power Reserves, Utah, DA-1) for a determination to be made with respect to the following-described lands, 240 acres in area, near Blacksmith Fork, Utah:

Salt Lake meridian, Utah:

T. 10 N., R. 2 E., sec. 1, S.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; T. 10 N., R. 3 E., sec. 7, lots 1, 2, 3, and 8,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the following lands:

Salt Lake meridian, Utah:

T. 10 N., R. 3 E., sec. 7, lots 1, 2, 3, and 8,

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), but that it is unable to determine that the value of the remainder of the lands applied for will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of said act.

15. H. R. Fuller of Neble, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-6), for a determination to be made with respect to the following-described lands, 3.3 acres in area:

Wind River meridian, Wyoming:

All portions of the following tract lying within 50 feet of the center line of the transmission line location shown on maps designated as Exhibit J, map No. 2, sheets Nos. 1 to 6, inclusive, and entitled "Map of Primary Transmission Line, Wyoming Power Company," and filed in the office of the Federal Power Commission on January 6, 1921:

T. 2 N., R. 5 E., sec. 25, S.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

16. John R. Boardman of Oklahoma City, Okla., having filed an application (E, Power Reserves, Wyoming, DA-8), for a determination to be made with respect to the following-described lands, 31.03 acres in area, near Torrey Lake, Wyoming:

Sixth principal meridian, Wyoming:

T. 41 N., R. 106 W., sec. 34, lot 2,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

17. Lewis Bennion, Box 464, Meeteetse, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-10) for a determination to be made with respect to the following-described lands, 160 acres in area, near Wood River: Sixth principal meridian, Wyoming:

T. 48 N., R. 101 W., sec. 22, SE.  $\frac{1}{4}$  SE  $\frac{1}{4}$ ; sec. 23, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 26, W.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063).

The executive secretary presented the application of the Western States Gas and Electric Co., of Stockton, Calif., for approval of assignment to the El Dorado Power Co., a subsidiary of the Western States Gas and Electric Co., of all the rights granted to the Western States Gas and Electric Co. by license for project No. 78, on the south fork of American River, in the State of California, so far as they relate to Medley Lakes Reservoir, Twin Lakes Reservoir, Echo Lake Reservoir, and Echo Lake Conduit, stating that the assignment of these project works is represented to be necessary for financial reasons. It was voted by the commission that the transfer of said rights as described in the instrument of assignment, dated March 25, 1922, a certified copy of which is on file with the records of the Federal Power Commission, be approved, and that the executive secretary be authorized to issue the formal written approval of the said assignment.

The meeting adjourned at 5.13 p. m.

O. C. MERRILL, *Executive Secretary.*

### THIRTY SECOND MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR, APRIL 17, 1922.

Meeting called to order at 4.10 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. Wm. Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; William V. King, chief accountant; and F. W. Griffith, chief clerk.

The record of the proceedings of March 27, 1922, was approved.

The executive secretary presented a list of 11 applications, Nos. 290 to 300, inclusive, received since the meeting of March 27, 1922.

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The executive secretary stated that eight projects had been advertised since the meeting of March 27, 1922, and that three declarations of intention had been filed.

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#### *Licenses.*

The executive secretary presented five applications for license, upon which action was taken as follows:

1. In the matter of the application of the Southern California Edison Co., of Los Angeles, Calif. (project No. 120), for a license for a power project on

the San Joaquin River and on lands of the United States wholly within the Sierra National Forest, Fresno and Madera Counties, Calif.; said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period terminating March 3, 1971, subject to the provisions of said act to the rules and regulations of the Commission pursuant thereto, to the following special conditions and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Sierra National Forest:

(a) Nothing in this license is to be understood or construed as recognizing, approving, or in any way affecting any contract or agreement entered into by the licensee with irrigation or other interests relative to regulation of flow in the San Joaquin River.

2. In the matter of the application of the Portland Railway, Light & Power Co., of Portland, Oreg. (project No. 135), for a license for a power project on Clackamas River and Oak Grove fork of Clackamas River and on lands of the United States partly within the Oregon National Forest, Clackamas County, Oreg.; said company having submitted satisfactory evidence of its compliance with the laws of the State of Oregon as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for that part of the project described in the application as the "initial project" for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special condition and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Oregon National Forest:

(a) The licensee shall replace the present Forest Service grounded telephone line from the end of the present Forest Service metallic circuit telephone line, which is approximately in the neighborhood of Duncan's ranch in sec. 1, T. 4 S., R. 4 E., W. M., to a point about 1,000 feet beyond the end of the proposed transmission line of the licensee in the neighborhood of Three Link Creek in sec. 6, T. 5 S., R. 6 E., with a metallic circuit telephone line on poles to be the property of the United States. The telephone line shall consist of

two No. 9 galvanized-iron telephone wires strung on wooden brackets and glass insulators on 25-foot cedar poles, having not less than 6-inch tops, and set 30 poles to the mile. The line shall be built to conform with the standard Pacific States Telephone & Telegraph Co.'s specifications covering this type of telephone line. As far as possible the line shall extend along the side of the existing and proposed road on the opposite side of the road from the proposed transmission line. All crossings of the transmission line over the telephone line shall be made to conform with the standard practice in the State of Oregon.

3. In the matter of the application of the Southern Sierras Power Co., of Riverside, Calif. (project No. 155) for a license for a power project on Snow Creek and its tributaries and on lands of the United States within the Cleveland National Forest, Riverside County, Calif., said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of the Federal Water Power Act, and of its ability to finance the construction of the project works proposed, notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality, the maps, plans, and specifications of the proposed project works having been approved by the commission, and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to the following special condition, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Cleveland National Forest:

(a) Subject to the provisions of section 13 of the act, the licensee to begin the construction of the several separable parts of the project works on or before such dates as may be fixed by the executive secretary, acting on behalf of the Commission.

4. In the matter of the application of the California Oregon Power Co. (project No. 292) for a license for a section of a transmission line and appurtenant structures on and across lands of the United States partly within the Shasta National Forest, Shasta County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures, the maps, plans, and specifications thereof having been approved by the Commission and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and to such con-

ditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Shasta National Forest.

5. In the matter of the application of the Southern California Edison Co., of Los Angeles, Calif. (project No. 298), for a license for that part of its power project on Kaweah River, lying outside the Sequoia National Park, purchased from the Mount Whitney Power Co., the executive secretary stated that the entire project is covered by permits granted to the Mount Whitney Power Co. by the Interior Department for the part lying within the national park, and by the Department of Agriculture for that part lying outside the national park; that the Southern California Edison Co. purchased the rights of the Mount Whitney Power Co. and applied to the two departments for the transfer of the permit; that the transfer was approved by the Interior Department, August 19, 1920, for the part within the national park; that the Secretary of Agriculture refused to approve the transfer of the permit granted by his department for the part without the national park on the ground that the passage of the Federal Water Power Act deprived him of any authority to act in the matter. It was voted that a license for 50 years be issued to the Southern California Edison Co. for that part of the proposed project lying outside the national park and covered by the original permits from the Department of Agriculture, subject to the provisions of the Federal Water Power Act, to the rules and regulations of the commission pursuant thereto, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of the Sequoia National Forest.

#### *Preliminary permits.*

The executive secretary presented three applications for preliminary permits, upon which action was taken as follows:

1. In the matter of the application of Frank G. Baum, of San Francisco, Calif. (project No. 90), for a preliminary permit and license for a power project on the Little Colorado River and on lands of the United States partly within the Navajo Indian Reservation, in Coconino County, Ariz., involving the construction of a reservoir of about 545,000 acre-feet capacity formed by a dam at Tolchaco, a power house at said dam, a dam, pipe line, and power house at Grand Falls, and a dam, tunnel, pipe line, and power house at Coconino Point; said company having submitted satisfactory evidence of its right to perform within said State of Arizona the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto.

2. In the matter of the application of S. A. Mushen and G. D. Cronemiller, of Lakeview, Oreg. (project No. 143), for a preliminary permit and license for a power project on Deep and Camas Creeks, in Lake County, Oreg., involving the construction of three dams, three conduits, and two power houses of approxi-

mately 400 horsepower capacity each, said applicants having submitted satisfactory evidence of their right to perform within said State of Oregon the acts necessary for the purposes of such permit and of their ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of one year, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to a special provision to the effect that when a more complete development of the water resources of the region is undertaken involving the construction and operation of reservoirs in the headwaters of Deep and Camas Creeks for irrigation and power purposes, the licensee shall agree to abide by whatever conditions the Commission may in its judgment prescribe governing the operation of said reservoirs, in the interest of the fullest practicable utilization of the water resources of the region.

3. In the matter of the application of the Portland Railway Light & Power Co., of Portland, Oreg. (project No. 234), for a preliminary permit and license for a power project on lands of the United States within the Oregon National Forest, in Clackamas County, Oreg., involving the construction of a dam and reservoir on Clackamas River and a conduit leading from said river to Oak Grove Fork of Clackamas River and involving the construction of a dam and reservoir at Timothy Meadows, on said Oak Grove Fork; said company having submitted satisfactory evidence of its right to perform within said State of Oregon the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of three years subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

#### *Revocation of authority.*

The executive secretary recommended that the authority previously given for the issue of preliminary permits be revoked in the cases mentioned below, because of failure to accept the permits. Action was taken as follows:

1. In the matter of the preliminary permit authorized for issuance to Kelly Mines Co. (project No. 207) for a power project on Fishhook Creek and Little Susitna River, located in Knik precinct and recording district, Territory of Alaska, said Kelly Mines Co. having failed to accept said preliminary permit within a reasonable time, and having stated that it desires to abandon the project, it was voted that the authorization for the issuance of said preliminary permit, voted on August 15, 1921, be and the same is hereby revoked.



2. In the matter of the preliminary permit authorized for issuance to Maurice D. Leehey (project No. 136) for a power project on Beaver Falls Creek and at Lake Mahoney on lands of the United States within the Tongass National Forest, Alaska, said Maurice D. Leehey having failed to accept said preliminary permit within a reasonable time, and having stated that there is no immediate prospect of his financing the project or the preliminary investigational work with reference thereto, it was voted that the authorization for the issuance of said preliminary permit, voted on January 24, 1922, be and the same is hereby revoked.

*Amendment of authorization for license.*

The executive secretary recommended the amendment of the authorization issued January 24, 1922, for license to the George Inlet Packing Co. for a small project located on Beaver Falls Creek, so as to make the license run for 50 years instead of 10 years, as previously authorized, stating that the previous action was taken in view of the application of Mr. Maurice D. Leehey for a preliminary permit for a complete development of the power of Beaver Falls Creek; that Mr. Leehey has since withdrawn his application; and that the George Inlet Packing Co. has protested against the short period for which it was proposed to issue the license on the ground that its investment of \$60,000 would be seriously injured thereby. Upon consideration of the matter the Commission took the following action:

In the matter of the license authorized for issuance January 24, 1922, to the George Inlet Packing Co. (project No. 206), it was voted that said license be granted for a period of 50 years instead of a period of 10 years, as previously authorized.

*Declaration of intention.*

Upon recommendation of the executive secretary the following action was taken:

In the matter of the declaration of intention of W. L. Hirst, of Towanda, Ill., to construct a dam across and in Money Creek in the vicinity of Towanda, McLean County, Ill., for the purpose of developing power, the Commission having caused investigation of such proposed construction to be made, and it appearing upon such investigation that said Money Creek in said vicinity is not "navigable waters," as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

*Restorations to entry.*

1. Ernest E. McKee, of Klink, Tulare County, Calif., having filed an application (E, Power Reserves, DA-7) for a determination to be made with respect to the following-described lands, 240 acres in area, near the junction of Eshom Creek with north fork Kaweah River:

Mount Diablo meridian, California:

T. 15 S., R. 28 E., sec. 28, NE.  $\frac{1}{4}$ , E.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act approved June 10, 1920 (41 Stat., 1063).

2. The executive secretary having called to the attention of the Commission the desirability of making a general determination under the provisions of section 24 of the Federal Water Power Act with respect to lands of the United States heretofore or hereafter reserved or classified as power sites which are applied for, or occupied and used for transmission-line purposes only, the Commission votes as follows:

(a) That where lands of the United States have heretofore been, or hereafter may be, reserved or classified as power sites, such reservation or classification being made solely because such lands are either occupied by power transmission lines or their occupancy and use for such purposes has been applied for or authorized under appropriate laws of the United States, and such lands have otherwise no value for power purposes, and are not occupied in trespass, the Commission determines that the value of such lands so reserved or classified, or so applied for or authorized, will not be injured or destroyed for the purposes of power development by location, entry, or selection under the public land laws, subject to the reservation of section 24 of the Federal Water Power Act.

(b) That when notice is given to the Secretary of the Interior of reservations made under the provisions of section 24 of the Federal Water Power Act, such notice shall indicate what lands so reserved, if any, may, in accordance with the determination of the preceding paragraph, be declared open to location, entry, or selection, subject to the reservation of said section 24.

#### *Miscellaneous.*

The executive secretary stated that the cities of St. Paul and Minneapolis, Minn., do not appear to be making progress in getting together on a plan of power development, and desired the views of the Commission as to whether or not any action should be taken in the matter. It was voted that no action will be taken prior to the adjournment of the next legislature; but that if by that time no provision is made for a joint development by the municipalities involved, the Commission will give further consideration to applications for power development at said dam.

The executive secretary called attention to the hearings involving power and irrigation developments on the Colorado River, desiring the views of the Commission as to whether or not consideration should be given to applications for power developments on said river. It was voted by the Commission that action upon applications involving this river be suspended for the present so that consideration may be given to the bearing of any proposed project on a general plan of river development.

The meeting adjourned at 5 p. m.

O. C. MERRILL, *Executive Secretary.*

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#### THIRTY-THIRD MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR, MAY 17, 1922.

Meeting called to order at 3.10 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; Col. William Kelly, chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of April 17, 1922, was approved.

The chief engineer presented a list of seven applications, Nos. 301 to 307, inclusive, received since the meeting of April 17, 1922.

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The chief engineer stated that 10 projects had been advertised since the meeting of April 17, 1922, and that one declaration of intention had been filed.

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#### *Licenses.*

The chief engineer presented two applications for licenses for transmission lines, upon which action was taken as follows:

1. In the matter of the application of The California-Oregon Power Co. (project No. 281) for a license for a transmission line and appurtenant structures on and across lands of the United States partly within the Crater and the Umpqua National Forests, and in Jackson, Douglas, and Lane Counties, Oreg., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Oregon, as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures; the general map, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1), of said act, and subject also to the following special condition and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Crater and Umpqua National Forests:

(a) Any existing Forest Service grounded circuit telephone lines that will be paralleled by the proposed transmission line shall be replaced, at the expense of the licensee, with a metallic telephone line which shall be constructed under permit from the district forester at Portland, Oreg., in a manner satisfactory to him.

2. In the matter of the application of the Black Mountain Telephone Corporation (project No. 295) for a license for a transmission line and appurtenant structures on and across lands of the United States within the Boone National Forest, McDowell County, N. C., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of North Carolina, as required by section 9, subsection (b), of said act; the map thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not neces-

sary in the public interest and may be waived under the authority of said section 10, subsection (1), of said act, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Boone National Forest.

*Preliminary permits.*

The chief engineer presented nine applications for preliminary permits, upon which action was taken as follows:

1. In the matter of the application of R. G. McDonald, of Williams, Calif., (project No. 75) for a preliminary permit and license for a power project on Convict Creek and on lands of the United States within the Inyo National Forest, in Mono County, Calif., involving the construction of four dams, three water conduits, and two power houses; said applicant having submitted satisfactory evidence of right to perform within said State of California the acts necessary for the purposes of such permit; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special conditions that if license is issued for the said proposed project it shall provide—

(a) That such license is issued for the construction and operation of necessary works as therein described solely for the purpose of generating power and for no other purpose or purposes.

(b) That the operation of storage works in connection with the project works authorized under such license shall be such that no harmful interference will result to the storage and use of waters of Owens River under vested rights; and that the acceptance of such license by the licensee shall be considered an agreement on the part of the licensee that in the event of claim of such harmful interference being set up by the owners of vested rights, then said licensee shall modify such method of operation in accordance with such rules as may be laid down by the Division of Water Rights, State Department of Public Works, or Federal Power Commission, or both.

2. In the matter of the application of Joseph B. Leighton, of Miles City, Mont. (project No. 109), for a preliminary permit and license for a power project on the Yellowstone River, a navigable waterway of the United States, and on lands of the United States in Custer County, Mont., involving the construction of a dam and power house on the Yellowstone River at Buffalo Rapids, about 9 miles below Miles City, at which 21 feet head will be utilized to develop 15,000 horsepower at high water and 8,000 horsepower at normal stage, for transmission up and down the valley 55 and 80 miles respectively, for light and power use and irrigation pumping, said applicant having submitted satisfactory evidence of citizenship and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water

Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special condition:

(a) In case the United States shall at any time desire to provide navigation facilities at this dam, the licensee shall convey to the United States free of cost such of his lands and his rights of way and such right of passage through the dam and permit or exercise such control of pools as may be required to provide such navigation facilities, and he shall make such provision in the approved design and in the construction of the project works in accordance therewith as will permit such passage through the dam and such control of pools.

3. In the matter of the application of Frank L. Ballaine, 424 Alaska Building, Seattle, Wash. (project No. 119), for a preliminary permit and license for a power project on Kenai River and on lands of the United States within the Chugach National Forest in Kenai recording district, a precinct of Alaska, involving the construction of a dam, conduit and power house; said applicant having submitted satisfactory evidence of his right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that a preliminary permit be issued for a period of two years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, and to the following special condition:

(a) If license is issued it may contain a condition requiring the licensee to provide proper protection to the run of fish in Kenai River by constructing a satisfactory fishway over or by its dam, or by establishing a fish hatchery at a suitable point above the same, or otherwise.

4. In the matter of the application of J. G. Galvin, 620 Alaska Building, Seattle, Wash. (project No. 257), for a preliminary permit and license for a power project on Aarons Creek, and on lands of the United States within the Tongass National Forest, Territory of Alaska, involving the construction of a dam, a water conduit, a power house, and a transmission line; said applicant having submitted satisfactory evidence of his right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said proj-

ect can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of 28 months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) If license is issued for said proposed project in pursuance of this preliminary permit the said license may contain a special condition requiring the licensee to provide proper protection to the run of fish in Aarons Creek by constructing a fishway over or by its dam, by establishing a fish hatchery at a suitable point above the same, or otherwise.

(b) As a condition precedent to the issuance of license the permittee shall be required to make satisfactory arrangements with the Forest Service for a timber supply for the pulp and paper mill which is to be supplied with power by the said project.

5. In the matter of the application of the Northwestern Electric Co., of Vancouver, Wash. (project No. 264), for a preliminary permit and license for a power project on Lewis River, a navigable waterway of the United States, and its tributaries, and on lands of the United States partly within the Columbia National Forest in Skamania, Cowlitz, and Clarke Counties, Wash., involving the construction of two storage reservoirs, seven conduits, and three power houses; said company having submitted satisfactory evidence of its right to perform within said State of Washington the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses, and neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of one year for that part only of the proposed project consisting of the conduit, dam, reservoir, and power house, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(a) The license shall permit the use of any reservoir included in the project for the temporary storage or for the transportation of logs, ties, poles, lumber, or other forest products, and upon demand of the Secretary of War, shall construct a logway or logways approved by said Secretary and suitable for the passage of such logs, ties, poles, lumber, or other forest products, over or around the dam at any such reservoir without undue hindrance or delay: *Provided*, That the use of said reservoir or of such logway or logways by owners of such logs, ties, poles, lumber, or other forest products shall be under such rules and regulations adopted by the licensee as may be approved by the Secretary of War. And it was voted to deny the part of the application relating to the proposed upper developments, consisting of Gilbert storage dam, reservoir, conduit, Pine and Swift Creek diversions, Swift Creek power house,

Carter diversion dam and conduit, Cougar Creek diversion, and Cougar Creek power house.

6. It was further voted that the application of the Lewis River Hydro-Electric Co. (project No. 222), which conflicts with the above-described application of the Northwestern Electric Co., be denied.

7. In the matter of the application of the City of Wrangell, Alaska (project No. 269), for a preliminary permit and license for a power project on Mill Creek and Virginia Lake, and on lands of the United States within the Tongass National Forest, Alaska, involving the construction of a dam at the outlet of the lake, a conduit, power house, and transmission line; said applicant having submitted satisfactory evidence of its right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published, as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that a preliminary permit be issued for a period of two years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, and to the following special condition:

(a) If license is granted it shall contain a special condition or provision to the effect that the licensee shall agree to permit of a fuller development of the power possibilities of Mill Creek whenever the need for said power makes said development feasible, the terms of the agreement whereby said increased development is undertaken to be subject to the approval of the Commission.

8. It was further voted that the application of J. G. Galvin (project No. 153), which conflicts with the above-described application of the City of Wrangell, Alaska, be denied.

9. In the matter of the application of Edward T. Brown, of Endless Caverns, New Market, Va. (project No. 283), for a preliminary permit and license for a power project on Cub and Pitt Spring Runs, and on lands of the United States within the Shenandoah National Forest, in Page County, Va., involving the construction of three dams and reservoirs, two conduits, and one power house; said applicant having submitted satisfactory evidence of his right to perform within said State of Virginia the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that preliminary permit be issued for a period of one year, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

*Declarations of intention.*

Upon recommendation of the chief engineer of the Commission, concurring in the recommendation of the Chief of Engineers of the U. S. Army, action was taken upon two declarations of intention, submitted under section 23 of the Federal Water Power Act, as follows:

1. In the matter of the declaration of intention of the Ozark Power & Water Co., of 414 Joplin Street, Joplin, Mo., to construct a dam across and in White River in the vicinity of Table Rock, sec. 23, T. 22 N., R. 22 W., Taney County, Mo., for the purpose of developing power; the Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that White River is navigable within the definition of the Federal Water Power Act, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

2. In the matter of the declaration of intention of George P. Rich, of Pembina, N. Dak., to construct a dam across and in Pembina River in the vicinity of Neche, Pembina County, N. Dak., for the purpose of developing power; the Commission having caused investigation of such proposed construction to be made and it appearing upon investigation that said Pembina River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act and that such proposed construction would not affect the interests of interstate or foreign commerce; it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

*Restorations to entry.*

The chief engineer submitted 25 applications for restorations to entry under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. The Acting Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, California, DA-22) for a determination to be made with respect to the following-described lands, 4 acres in area, which are included in the homestead application of Angelo Bonovia (serialized Sacramento 013734):

All portions of the following-described lands lying within 50 feet of the center line of the constructed transmission line of the Sierra and San Francisco Power Co.

Mount Diablo meridian, California:

T. 2 N., R. 15 E., sec. 20, SE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 21, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 28, NW.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ; sec. 29, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. The Acting Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, California, DA-20) for a determination to be made with respect to the following-described lands, 4 acres in area, which are included in the homestead application of David Eltringham (serialized Sacramento 013562):

All portions of the following-described lands within a strip defined in width by a line on the north side 50 feet from the center line of the north transmission line and a line on the south side 50 feet from the center line of the south



transmission line of the constructed transmission lines of the Sierra and San Francisco Power Co.

Mount Diablo meridian, California :

T. 3 N., R. 14 E., sec. 16, S.  $\frac{1}{2}$  SW.  $\frac{1}{2}$  SW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for purposes of power development by location, entry, or selection, under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. The Acting Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, California, DA-23) for a determination to be made with respect to the following-described lands, 13 acres in area, which are included in the homestead application of Giovanni Segale (serialized Sacramento 013479) :

All portions of the following-described lands lying within 50 feet of the center line of the transmission line location of the Pacific Gas & Electric Co. :

Mount Diablo meridian, California :

T. 2 S., R. 15 E., sec. 2, lot 1, S.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ ; sec. 12, lot 3, E.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ , W.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ .

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for purposes of power development by location, entry, or selection, under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. William N. Taylor, of Plymouth, Calif., having filed an application (E, Power Reserves, California, DA-11) for a determination to be made with respect to the following-described lands, 440 acres in area, near Middle Fork Cosumnes River, Calif. :

Mount Diablo meridian, California :

T. 8 N., R. 11 E., sec. 4, SW.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ; T. 9 N., R. 11 E., sec. 27, N.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ; sec. 28, W.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SE.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ , E.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the following lands, 240 acres in area :

Mount Diablo meridian, California :

T. 8 N., R. 11 E., sec. 4, SW.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ; T. 9 N., R. 11 E., sec. 27, N.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ; sec. 28, NE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ,

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063), but that it is unable to determine that the value of the remainder of the lands applied for will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920.

5. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, California, DA-25) for a determination to be made with respect to the following-described lands, 3.4 acres in area, which are included in the homestead application of Albert V. Underhill (serialized Sacramento 013860) :

All portions of the following-described lands lying within 50 feet of the center line of the transmission line location of the Pacific Gas & Electric Co. :

Mount Diablo meridian, California :

T. 15 N., R. 8 E., sec. 26, SW.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

6. Ira Allenthorp, of Leadville, Colo., having filed an application (E, Power Reserves, Colorado, DA-1) for a determination to be made with respect to the following-described lands, 320 acres in area, near Tennessee Fork, a tributary of Arkansas River:

Sixth principal meridian, Colorado:

T. 9 S., R. 80 W., sec. 9, E.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , SW.  $\frac{1}{2}$ , NW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

7. Lester Burns, of Meeker, Colo., having filed an application (E, Power Reserves, Colorado, DA-21) for a determination to be made with respect to the following-described lands, 40 acres in area, near South Fork White River, Colo.:

Sixth principal meridian, Colorado:

T. 1 S, R. 91 W., sec. 23, NW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ , and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

8. Thomas Brushwood, of Barber, Ada County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-26) for a determination to be made with respect to the following-described lands, 189.70 acres in area, near Boise River, Idaho:

Boise meridian, Idaho:

T. 2 N., R. 4 E., sec. 5, NW.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ , lots 8, 9, 10, and 11, and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

9. John J. Burns, of Copperfield, Oreg., having filed an application (E, Power Reserves, Idaho, DA-46) for a determination to be made with respect to the following-described lands, 294.53 acres in area, near Snake River, Idaho:

Boise meridian, Idaho:

T. 19 N., R. 4 W., sec. 5, lots 1, 2, 3, 4; T. 20 N., R. 4 W., sec. 32, lots 1, 2; sec. 33, lots 1, 2, and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

10. Charles Edward Hack, of Milner, Twin Falls County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-52) for a determination to be made with respect to the following-described lands, 40 acres in area, near Snake River, Idaho:

Boise meridian, Idaho:

T. 10 S., R. 21 E., sec. 30, SE.  $\frac{1}{2}$  SE.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

11. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Idaho, DA-47) for a determination to be made with respect to the following-described lands, 7 acres in area, which are included in an indemnity school selection of the State of Idaho (serialized Boise 026079) :

All portions of the following-described lands lying within 50 feet of the center line of the transmission line right of way as shown on maps accompanying the application of the Great Shoshone and Twin Falls Water Power Co. (serialized Boise 012360, filed March 23, 1912, and Hailey 010877, filed February 5, 1912) ;

Boise meridian, Idaho :

T. 5 S., R. 9 E., sec. 25, N.  $\frac{1}{2}$  NE.  $\frac{1}{2}$  ; SE.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

12. Edgar Kirk, of Barber, Idaho, having filed an application (E, Power Reserves, Idaho, DA-27) for a determination to be made with respect to the following-described lands, 80 acres in area, near Boise River, Idaho :

Boise meridian, Idaho :

T. 3 N., R. 4 E., sec. 28, SW.  $\frac{1}{2}$  NE.  $\frac{1}{2}$ , NE.  $\frac{1}{2}$  SW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

13. The acting commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Idaho DA-43) for a determination to be made with respect to the following-described lands, three acres in area, which are included in the isolated tract application of Harry W. Knox (serialized Hailey 026712) :

All portions of the following described lands lying within 50 feet of the center line of the transmission line right of way as shown on maps accompanying the application of the Great Shoshone and Twin Falls Water Power Co. (serialized Boise 012360, filed March 23, 1912, and Hailey 010877, filed February 5, 1912) :

Boise meridian, Idaho :

T. 5 S., R. 10 E., sec. 30, lot 2,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

14. J. J. Phillips, of Smith's Ferry, Idaho, having filed an application (E, Power Reserves, Idaho, DA-53) for a determination to be made with respect to the following described lands, 116.50 acres in area, near Payette River, Idaho :

Boise meridian, Idaho :

T. 9 N., R. 3 E., sec. 28, lot 11 ; sec. 33, N.  $\frac{1}{2}$  NW.  $\frac{1}{2}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

15. Daniel E. Began, of Twin Falls, Idaho, having filed an application (E, Power Reserves, Idaho, DA-34) for a determination to be made with respect to the following-described lands, 130.31 acres in area, near Snake River, Idaho; Boise meridian, Idaho:

T. 10 S., R. 21 E., sec. 30, lots 3, 4, 9, NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

16. Walker S. Rich, of Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-41) for a determination to be made with respect to the following-described lands, 640 acres in area, near Blackfoot River, Idaho: Boise meridian, Idaho:

T. 5 S., R. 40 E., sec. 11, SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , S.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 14, NW.  $\frac{1}{4}$ ; sec. 15, NE.  $\frac{1}{4}$ , S.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , N.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

17. M. Thatcher Allred, of Blackfoot, Idaho, having filed an application (E, Power Reserves, Idaho, DA-44) for a determination to be made with respect to the following-described lands, 640 acres in area, near Blackfoot River, Idaho: Boise meridian, Idaho:

T. 5 S., R. 40 E., sec. 5, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 6, SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , W.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 7, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ; sec. 8, NW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

18. H. E. Hollingsworth, Merlin, Oreg., having filed an application (E, Power Reserves, Oregon, DA-29) for a determination to be made with respect to the following-described lands, 120 acres in area, near Rogue River, Oreg.:

Willamette meridian, Oregon:

T. 35 S., R. 7 W., sec. 13, SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , S.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

19. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Oregon, DA-32) for a determination to be made with respect to the following-described lands, 4.5 acres in area, which are included in the homestead application of Melvoll Leonard Main (serialized Roseburg 013257):

All portions of the following lands lying within 50 feet of the center line of the constructed transmission line of the California-Oregon Power Co.:

Willamette meridian, Oregon:

T. 41 S., R. 4 E., sec. 7, SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ , NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

20. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Oregon, DA-31) for a determination to be made with respect to the following-described lands, 8.5 acres in area, which are included in the homestead application of Acey C. Martin (serialized Roseburg 013078):

All portions of the following lands lying within 50 feet of the center line of the constructed transmission line of the California-Oregon Power Co.:

Willamette meridian, Oregon:

T. 36 S., R. 2 W., sec. 1, NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

21. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Oregon, DA-34) for a determination to be made with respect to the following-described lands, 1.5 acres in area, which are included in the homestead application of George P. Martin (serialized Roseburg 013698):

All portions of the following lands lying within 50 feet of the center line of the constructed transmission line of the California-Oregon Power Co.:

Willamette meridian, Oregon:

T. 36 S., R. 4 W., sec. 21, lot 10,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

22. The Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, Oregon, DA-33) for a determination to be made with respect to the following-described lands, 4.4 acres in area, which are included in the homestead application of Terry Quigley (serialized Roseburg 013258).

All portions of the following lands lying within 50 feet of the center line of the constructed transmission line of the California-Oregon Power Co.:

Willamette meridian, Oregon:

T. 41 S., R. 4 E., sec. 7, lot 1 and NE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

23. Iva C. Aldrich, Ishawooa, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-7) for a determination to be made with respect to the following-described lands, 58.17 acres in area, near South Fork Shoshone River:

Sixth principal meridian, Wyoming:

T. 50 N., R. 105 W., sec. 14, lot 3,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

24. Leslie E. Johnson, of Cody, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-1) for a determination to be made with respect to the following-described lands, 165.18 acres in area, near South Fork Shoshone River:

Sixth principal meridian, Wyoming:

T. 51 N., R. 104 W., sec. 23, lots 16, 17, 30, and 31; sec. 24, lot 34; sec. 25, lot 11; sec. 26, lots 1, 5, and 6,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

25. Simon Snyder, of Ishawooa, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-12) for a determination to be made with respect to the following described lands, 117.94 acres in area, near South Fork Shoshone River:

Sixth Principal Meridian, Wyo.:

T. 50 N., R. 105 W., sec. 27, lots 3, 4, and 6,

and the facts with respect thereto having been presented by the chief engineer, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

#### *Miscellaneous.*

The chief engineer stated that two conflicting applications have been made for power development on Sultan Creek in Snohomish County, Wash., one by the City of Everett, Wash. (project No. 112), and the other by the Sound Power Co., Washington (project No. 10); that the development proposed by the City of Everett not being adaptable to a complete scheme of development, and it appearing at a local hearing that it was doubtful whether the City of Everett intended to proceed with its development, the suggestion was made to the mayor of the city that the application of the city be withdrawn; that the mayor has replied by letter dated May 10, 1922, suggesting that if action on the conflicting applications be deferred until after the November elections the question of power development by the city might be voted upon, and should the proposition go to defeat at that time the council might feel differently about withdrawing its application, and that if favorable action should be taken the city could proceed with the development faster than any private concern. It was voted by the Commission to defer action as requested by the mayor of the city.

The meeting adjourned at 4 p. m.

W. KELLY, Chief Engineer.

THIRTY-FOURTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
JUNE 23, 1922.

Meeting called to order at 3.05 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; and Maj. Lewis W. Call, chief counsel.

The record of the proceedings of May 17, 1922, was approved.

The executive secretary presented a list of 14 applications received since the meeting of May 17, 1922.

\* \* \* \* \*

The executive secretary stated that 12 projects had been advertised since the meeting of May 17, 1922, and that four declarations of intention had been filed.

\* \* \* \* \*

*Licenses.*

The executive secretary presented three applications relating to licenses upon which action was taken as follows:

1. In the matter of the application of the Rock Creek Power Co., of Missoula, Mont. (project No. 70), for an extension of two years within which to commence, and a like period within which to complete, the construction of its project licensed by the Commission on August 29, 1921; it appearing to the Commission that there is at present no market for the power and that owing to the recent industrial depression it is impracticable to finance the project at this time, it was voted that the period for commencement of construction be extended to July 1, 1924, and for completion of construction to August 1, 1926. It was further voted that the executive secretary be authorized to issue a formal written instrument evidencing such extension.

2. In the matter of the application of the Alabama Power Co., of Attalla, Ala. (project No. 82), dated April 25, 1922, and filed with the Commission June 15, 1922, for the approval of certain changes in the plans and specifications of its project works and for the amendment, accordingly, of the license issued to said company on June 27, 1921, as amended on September 24, 1921, said changes involving the installation of three units instead of two units as indicated in the original plans and specifications, the construction of a power house integral with the dam, and providing for the ultimate installation of four units instead of five units, the provision in the west abutment of the dam for a flume to a future unit to be installed on the west bank downstream from the dam, the modification of the original plans and specifications to incorporate designs in accordance with the requirements of machinery manufacturers, and substitution of a combination rock fill and timber crib for the timber crib section of the lock approach piers, it appearing to the Commission that the proposed changes are in detail only, will not involve any substantial alteration in or addition to the general plan of development, or any change in the pool levels, it was voted that the Commission finds that in view of the character of the changes no advertisement of the proposed amendment of the license is required by the Federal Water Power Act, that the proposed changes be approved, and that the executive secretary be authorized to execute and issue an instrument amending the license by the substitution of exhibits showing the amendments herein authorized for the corresponding exhibits of the original license as amended.

3. In the matter of the application of Peter F. Karst, of Salesville, Mont. (project No. 273), for a license for a power project on Moose Creek and on lands of the United States partly within the Gallatin National Forest, Gallatin County, Mont., the Commission having found that said project is a complete project of not more than 100 horsepower capacity, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said applicant having submitted satisfactory evidence of his compliance with the laws of the State of Montana, as required by section 9, subsection (b) of said act, and of his ability to finance the construction of said project; the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and subject also to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Gallatin National Forest.

*Approval of lease under license.*

The executive secretary presented the application of the Western States Gas & Electric Co., a corporation existing under the laws of the State of California and a licensee under license issued by the Federal Power Commission on December 29, 1921 (project No. 78, California), for approval of a lease, dated May 1, 1922, from the El Dorado Power Co., a corporation existing under the laws of the State of California, to said Western States Gas & Electric Co., and assignment thereof, dated May 27, 1922, by the Western States Gas & Electric Co. to the Girard Trust Co., trustee, covering, inter alia, all rights granted to the El Dorado Power Co. by virtue of a license issued to it, under date of February 23, 1922, by the Federal Power Commission for a project designated in the records of the Commission as project No. 184, California. He explained that said lease covers all the project property of the lessor and that said assignment is made in order specifically to subject the interests of the Western States Gas & Electric Co. in said lease to the lien of the mortgage or deed of trust, dated June 1, 1911, to the Girard Trust Co., trustee, securing the first and refunding mortgage 5 per cent gold bonds of the Western States Gas & Electric Co. He further explained that both the lease and assignment have been executed as a part of the proceedings for the financing of the project of the El Dorado Power Co. and that certified copies thereof are on file in the records of the Commission. It was voted by the Commission that said lease and assignment thereof be approved and that the executive secretary be authorized to issue a formal written instrument evidencing such approval.

*Transfer of lease.*

The executive secretary presented the application of the El Nido Mining Co., a corporation organized under the laws of the Territory of Alaska, for approval of the transfer from J. H. Cann to said company of the license issued on April 11, 1922, to the said J. H. Cann (project No. 213), on Cann Creek, at the head of Lisianski Inlet, Alaska, a project involving less than 100 horsepower, recommending approval of such transfer. It was voted that the transfer of said



license and of the rights thereunder granted be approved, and that the executive secretary be authorized to prescribe the form of such assignment and to issue a formal written instrument evidencing such approval of transfer.

*Preliminary permits.*

The executive secretary presented 18 applications relating to preliminary permits upon which action was taken as follows:

1. In the matter of the application of the Big Horn Canyon Irrigation and Power Co., of Hardin, Mont. (project No. 12), for a preliminary permit and license for a power project on the Big Horn River and on lands of the United States partly within the Crow Indian Reservation, in Carbon and Big Horn Counties, Mont., and Big Horn County, Wyo., it appearing that advertisement of the application had not been accomplished in accordance with the Federal Water Power Act prior to the authorization for issuance of said preliminary permit on March 27, 1922, and that the advertising has since been accomplished in accordance with said act, it was voted to reaffirm the action on said preliminary permit taken by the Commission on March 27, 1922.

2. With respect to the conflicting applications of the Sound Power Co. and the City of Everett on the Sultan River the executive secretary stated that the Sound Power Co. has applied for a preliminary permit for a power development on Olney Creek and Sultan River, Snohomish County, Wash. The project applied for includes two reservoirs, five dams, a conduit system, a transmission line, and two power houses. It proposes to make full development of the Sultan River, Olney Creek, and tributary streams, with considerable storage, and the net use of 1,278 feet of the total available head of approximately 1,300 feet. It expects to develop about 33,000 horsepower. The City of Everett has made application for a power development in connection with the municipal water supply on Sultan River. The project includes a diversion dam on the Sultan River, a conduit to Lake Chaplain, storage in Lake Chaplain, and a conduit from Lake Chaplain to Horseshoe Bend on the Sultan River. The project does not lend itself to a complete development of the stream, as it uses only 265 feet of the available land, and does not make full use of the flow of the stream even over the head developed. The total power contemplated to be developed is 2,860 horsepower.

In view of the fact that the City of Everett does not propose a scheme of development that will make full use of either the flow of the stream or the head available, and since its project can not be made to conform to a complete scheme of development, nothing can be gained by delaying further in the matter. It is therefore recommended that the application of the City of Everett be denied and that preliminary permit be granted the Sound Power Co. for its proposed development of Olney Creek and Sultan River.

The Commission thereupon voted to rescind its vote of April 17, 1922, whereby it had deferred action upon said application. The Commission also took the following action:

In the matter of the application of the Sound Power Co., of Seattle, Wash. (projects Nos. 10 and 112), for a preliminary permit and license for a power project on Olney Creek and the Sultan River, and on lands of the United States partly within the Snoqualmie National Forest, in Snohomish County, Wash., involving the construction of two storage reservoirs, five dams, a conduit system consisting of pipe, canal, and tunnel section, two power houses with auxiliary works and transmission lines; said company having submitted satisfactory evidence of its right to perform within said State of Washington the acts necessary for the purposes of such permit and of its ability to finance the preliminary

work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that the Sound Power Co. be required to allow water to pass its works on the Sultan River sufficient to meet the needs of the municipal water supply of the City of Everett.

3. It was further voted that the application of the City of Everett for a preliminary permit for a power development on Sultan River, which conflicts with said application of the Sound Power Co., be denied on the ground that the project proposed by the City of Everett does not and can not within a reasonable time be made equally well adapted to conserve and utilize in the public interest the water resources of the region.

4. In the matter of the application of the Southern Sierras Power Co., of Riverside, Calif. (project No. 124), for a preliminary permit and license for a power project on the Whitewater River, a nonnavigable waterway of the United States, and on lands of the United States partly within the Angeles National Forest, in San Bernardino and Riverside Counties, Calif., involving the construction of three power houses with auxiliary works and diversion conduits of siphon, tunnel, or canal section for each power house; said company having submitted satisfactory evidence of its right to perform within said State of California the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto.

5. It was further voted that the application of Marcus Pluth, of Los Angeles, Calif. (project No. 169), for a license for a proposed power development on Whitewater River, which said application conflicts with the above-described application of the Southern Sierras Power Co., be denied.

6. In the matter of the application of C. I. Kephart, of Washington, D. C. (project No. 167), for a preliminary permit and license for a power project on Merrill Lake, involving the diversion of Kalama River into Lewis River, and on lands of the United States partly within the Columbia National Forest, and in Cowlitz County, State of Washington, it appearing that the project is infeasible from an engineering point of view, that there is serious objection to diverting Kalama River into Lewis River, and that there is doubt as to the financial ability of the applicant to carry out his proposed project, it was voted that said application be denied.

7. In the matter of the application of C. I. Kephart, Washington, D. C. (project No. 168), for a preliminary permit and license for a power project on Toutle River, at the outlet of Spirit Lake, and on lands of the United States partly within the Columbia National Forest, State of Washington, it was voted that application be denied on the grounds that the applicant has not shown satisfactory financial ability to carry out the project and has not made a satisfactory showing of prospective market for the power to be developed, that the project is of doubtful feasibility, and that, if constructed, it would injure the important recreational value of Spirit Lake.

8. In the matter of the application of the Washington Water Power Co., of Spokane, Wash. (project No. 229), for a preliminary permit and license for a power project on the Columbia River, a navigable waterway of the United States, and on lands of the United States in Ferry and Stevens Counties, Wash., involving the construction of a dam and power house at Kettle Falls in the Columbia River; said company having submitted satisfactory evidence of its right to perform within said State of Washington the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee to provide in its plans for the construction by the United States at some future date of locks and appurtenant navigation facilities at the dam, the general dimensions of such locks to be in accordance with instructions from the United States district engineer at Seattle, Wash.

(2) The permittee so to design his project works as to leave free and open any existing portage at Kettle Falls.

(3) License if issued to contain a provision to the effect that if and when the United States shall decide to provide navigation facilities at the Kettle Falls Dam, the licensee shall convey to the United States such of its lands and its rights of way and such right of passage through its dam or other structures as may be required for navigation facilities constructed by the United States.

9. With respect to the conflicting applications of the Northern States Power Co., the St. Cloud Public Service Co., and the St. Cloud Electric Power Co., the executive secretary stated that the Northern States Power Co., of Minneapolis, Minn., filed an application for a preliminary permit for a proposed development consisting of three power projects in the Mississippi River, to be located at points near Otsego, Monticello, and Clearwater, Minn. Each of the three proposed dams is approximately 30 feet high and would develop all the head between the Otsego dam site and the existing St. Cloud Dam, at St. Cloud, Minn., with the exception of about 3 feet of lost head between the Otsego dam site and the Monticello dam site.

The St. Cloud Public Service Co. has filed an application for a preliminary permit for a proposed project to be located in the Mississippi River at the so-called Rigby dam site, which is about 2 miles above the Clearwater dam site of the Northern States Power Co., the difference in elevation between the two dam sites being about 3 feet, and the two projects being in direct conflict.

The St. Cloud Electric Power Co., a subsidiary of the St. Cloud Public Service Co. and representing the same interests, filed an application for a proposed power project to be located at the so-called St. Augusta dam site, about half way between Clearwater and St. Cloud, the proposed dam having a head of 14 feet, or approximately one-half the head at the proposed Clearwater Dam. The application of the St. Cloud Public Service Co. is designed to supersede the application of the St. Cloud Electric Power Co. and the latter should be rejected, the St. Cloud Electric Co. not being in a position to withdraw its application on account of the death of its president.

The conflicting applications of the Northern States and St. Cloud companies were investigated by the district engineer of the War Department at St. Paul and a public hearing was held. It was found that the St. Cloud Public Service Co. has immediate need for additional power to take care of its growing load in the region of St. Cloud, and if granted a permit will proceed without delay to prepare plans and undertake the development of the project. The Northern States Power Co. is looking ahead a number of years and making plans to take care of its increasing load. Its applications before the Commission contemplate the construction of six power houses. If given a preliminary permit for the Clearwater project, the construction would not be undertaken for a number of years.

In view of the above the Northern States Power Co. was notified that it was proposed to recommend to the Commission that its application for the Otsego and Monticello sites be granted, but that its application for the Clearwater site be denied, in order that the application of the St. Cloud Public Service Co. might be granted. It is accordingly recommended that a preliminary permit be granted the Northern States Power Co. for the Otsego and Monticello sites, with a provision that in so far as feasible the permittee shall prepare its plans for the Otsego Dam so that slack water will be created to the Monticello Dam, and its plans for the Monticello Dam so that slack water shall extend to the dam of the St. Cloud Public Service Co., wherever it may be located. It is further recommended that a preliminary permit be granted the St. Cloud Public Service Co. for a power project to be located at some point between the Clearwater site and the Rigby site, wherever investigation shall determine the most feasible location to be. It appears from information available that the Clearwater site is the better, but detailed study will be required to determine the point.

The Commission thereupon took the following action:

In the matter of the application of the Northern States Power Co., of Minneapolis, Minn. (project No. 250), for a preliminary permit and license for a power project on Mississippi River, a navigable waterway of the United States, in Sherburne and Wright Counties, Minn., involving the construction of a dam and power house at a point near Otsego, Minn., and another dam and power house at a point near Monticello, Minn.; said company having submitted satisfactory evidence of its right to perform within said State of Minnesota the acts necessary for the purpose of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, it was voted that preliminary permit be issued

for a period of three years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee to make further study of the Otsego site, with a view to developing all the head between it and the Monticello site.

(2) The permittee to provide in its plans for the construction by the United States of a lock and appurtenant navigation facilities at the dam, and the general dimensions of such lock to be in accordance with instructions from the United States district engineer at St. Paul, Minn.

(3) The license if issued to be on condition that licensee convey to the United States free of cost such of its lands and rights of way and such right of passage through its dam and other structures as may be required for navigation facilities.

10. In the matter of the application of the St. Cloud Public Service Co. of St. Cloud, Minn. (project No. 285), for a preliminary permit and license for a power project on Mississippi River, a navigable waterway of the United States, and affecting a tract of land of the United States upon which are located the lock and other navigation facilities at the St. Cloud Dam and in Sherburne, Stearns, and Wright Counties, Minn., involving the construction of a dam and power house to be located at some point between Clearwater, Minn., and the so-called Rigby site, about 2 miles above; said company having submitted satisfactory evidence of its right to perform within said State of Minnesota the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee to provide in its plans for the construction by the United States at some future date of a lock and appurtenant navigation facilities at the dam, the general dimensions of such lock to be in accordance with the instructions of the United States district engineer at St. Paul, Minn.

(2) License, if issued, to be on condition that licensee convey to the United States free of cost such of its lands and its rights of way and such right of passage through its dam and other structures as may be required for navigation facilities.

11. It was further voted that the application of the St. Cloud Electric Power Co., of St. Cloud, Minn. (project No. 29), for a preliminary permit and license for a power project on the Mississippi River involving the construction of a dam approximately 14 feet high at the so-called St. Augusta site, said project being in conflict with the more comprehensive project of the St. Cloud Public Service Co., be denied.

12. In the matter of the application of the Fort Klamath Meadows Co., of Fort Klamath, Oreg. (project No. 259), for a preliminary permit and license for a power project on Anna Creek and on lands of the United States within the Crater National Forest, in Klamath County, Oreg., involving the cons ruc-

tion of a dam, a water conduit, and a power house; said company having submitted satisfactory evidence of its right to perform within said State of Oregon the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of 21 months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The permittee to investigate and report fully upon the practicability of locating the proposed power house farther downstream, and especially at a point slightly above the Utter & Burns Mill, in sec. 36, T. 32 S., R. 6 E., W. M., with a view of utilizing a greater head and thereby making a more complete utilization of the power resources of Anna Creek.

(2) License, if issued, to contain a provision that any existing Forest Service grounded circuit telephone line that will be paralleled by proposed transmission line shall be replaced, at the expense of the licensee, with a metallic telephone line to be constructed under permit from the district forester, Portland, Oreg., in a manner satisfactory to him.

13. In the matter of the application of Franklyn L. Hutton, 61 Broadway, New York City, New York; Fred W. McNear, Insurance Exchange Building, San Francisco, Calif.; and Frank C. Dougherty, Palace Hotel, San Francisco, Calif. (project No. 275), for a preliminary permit and license for a power project on Cascade Creek on lands of the United States within the Tongass National Forest, in the southeastern part of the Territory of Alaska, involving the construction of a dam at the outlet of Swan Lake, a conduit consisting of tunnel and pipe section, and a power house with auxiliary works on the shore of Thomas Bay, all located within the Tongass National Forest, approximately 22 miles north of Petersburg, Alaska; said applicants having submitted satisfactory evidence of their right to perform within said Territory of Alaska the acts necessary for the purposes of such permit and of their ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the permit nor the license applied for will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired, it was voted that preliminary permit be issued for a period of 18 months, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The investigation of the proposed power development to be made with a view to a minimum initial development of 16,000 horsepower upon plans that will permit of full economic development of the site.

(2) The granting of license for said project to be contingent upon satisfactory arrangements previously made with the Forest Service regarding the supply of timber for use in the operation of such pulp plant.

*Declarations of intention.*

The executive secretary presented six declarations of intention submitted under section 23 of the Federal Water Power Act upon which action was taken as follows:

1. With respect to the declaration of intention of the Clarion River Power Co. the executive secretary stated that this declaration had been submitted to the Chief of Engineers of the War Department and that report had been made by the district engineer at Pittsburgh, Pa., whose report had been concurred in by the Chief of Engineers.

The report of the district engineer states that while the Clarion River itself has never been improved for navigation, its improvement by the removal of obstructions was recommended by the district engineer, Major Hoxie, in 1896, as an addition to improvements then being made to the Allegheny River. This recommendation stated that "a total appropriation of \$217,500 has been made up to date for the removal of such obstructions in the Allegheny River in connection with the construction of dikes, low dams, bank protection, etc., for open-river navigation; and it seems desirable to extend this class of work to the extent of removing obstructions to the channel of this (Clarion) important tributary."

The district engineer further reports that the Clarion River has been used for the transportation of persons and property in interstate commerce and quotes Major Hoxie's report to the effect that "the character of the products floated on these streams is about the same in each—lumber, timber, bark, boat bottoms, and farm products. It is estimated that during the past 35 years there has been an average annual shipment on the Clarion River of 40,000,000 feet, board measure, of sawed lumber, 3,000,000 cubic feet of logs and square timber, and 514 coal-boat bottoms, besides large quantities of other products, of which no estimate can be made. The output during the past year comprised 800 boat bottoms, 74,125,000 feet, board measure, of lumber, timber, etc." This was the situation in 1895. The district engineer states, however, that water transport declined on the Clarion River to a very small amount in 1907 and practically ceased in 1915. This was due to decrease in the amount of timber which could be handled by the river economically, to the increase in railroad facilities in the valley, and the decrease in the demand for the wood products of the river valley.

The facts presented above show that the Clarion River has been used and is now suitable for use for the transportation of property in interstate or foreign commerce. Furthermore, the stream is one of the principal tributaries of the Allegheny River, a navigable water over which interstate commerce passes at the present time, and the interests of such commerce on the Allegheny and on the Ohio would be affected by the proposed construction on the Clarion River if the same were free of any control by the United States.

Since the Clarion River will be blocked at the dams, and considerable storage behind such dams is contemplated, the discharge of water into the Allegheny and thence into the Ohio would be affected either adversely or favorably, depending upon the method of operating the dams. Probably the effect would be favorable on account of increased low water flow in the Allegheny and Ohio Rivers. In order, however, to safeguard the interests

of interstate or foreign commerce on the Clarion, Allegheny, and Ohio Rivers, the district engineer recommends that if license is issued, the licensee be required to construct sluiceways or other structures for the passage of logs over or around the dams, that the licensee convey to the United States any lands or rights of way that might be needed should the United States improve navigation on the Clarion, and that the flow past the dams be not permitted to fall below a certain prescribed volume of water.

The conclusions of the district engineer were submitted to the Clarion River Power Co. and opportunity given to make any further showing desired. The company has made no direct reply, but has instead submitted its application for a license.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Clarion River Power Co. of Pennsylvania to construct dams across and in Clarion River in the vicinities of Foxburg and Clarion, Clarion County, Pa., for the purpose of developing power: The Commission having caused investigation of such proposed construction to be made, and it appearing upon such investigation that said Clarion River is "navigable waters" within the definition of the Federal Water Power Act, and that the contemplated storage would affect the navigable capacity of the Allegheny and Ohio Rivers, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

2. With respect to the declaration of intention of the Chippewa Power Co. affecting the Chippewa River in Wisconsin, the executive secretary stated that according to the report of the district engineer of the War Department certain improvements for navigation have been made upon the Chippewa River under appropriations of Congress, but such improvements have been on a section of the stream below the proposed development of the Chippewa Power Co. No improvements have been made or proposed on that part of the river involved in the declaration of intention. In former years the Chippewa River was used for running logs, but the extension of a branch of the railroad to the remaining tracts of floatable timber at the headwaters of the stream has resulted in the discontinuance of the use of the river for log-driving purposes.

During the days of extensive lumber operations, many private sluicing dams were built on the Chippewa and on its tributaries, and it appears that dams were also constructed for use in logging operations. In 1877-78 a dam and lock were built at Eau Claire by a private company under authority of the State of Wisconsin. This dam, which was designed for power purposes and to facilitate the handling of loose logs, provides an effective bar to navigation in the stream and its construction has been considered to fix the upper limit of navigation on the river. Besides the Eau Claire dam there are dams at Wissota, 17 miles above Eau Claire, and at Cornell, 42 miles above Eau Claire. The proposed dam of the Chippewa Power Co. is between the Wissota and the Cornell Dams.

Under the circumstances there is no prospect of the river becoming used or usable for navigation to an extent which would require the intervention of the United States for its protection. It is, therefore, believed that the interests of interstate or foreign commerce would not be affected by the proposed construction and that the Chippewa River above Eau Claire is not "navigable waters" of the United States within the definition of the Federal Water Power Act.

The Commission thereupon took the following action:

3 and 4. In the matter of the declaration of intention of the Chippewa Power Co. to complete the construction of a dam across and in Chippewa River in the



vicinity of Jim Falls, Chippewa County, Wis., for the purpose of developing power, the Commission having caused investigation of such proposed construction to be made and it appearing upon investigation that said Chippewa River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

With respect to the declaration of intention of the Menominee and Marinette Light and Traction Co. and of the application for preliminary permit of the White Rapids Paper Co., both affecting the Menominee River, the executive secretary stated that the Menominee River is an interstate stream, forming a part of the boundary between the States of Michigan and Wisconsin. Only the lower 2 miles of the river is used for commercial navigation. Above this point the river could be used for rafting or logging purposes, but is in fact employed only to a very limited extent for such purposes. Above the navigable section the river is crossed by several dams. There is no boat navigation on this section and none could be had up or down the river and there is no probability that such navigation will develop in the future. Moreover, there is no such navigation across the river between Michigan and Wisconsin and no probability that it will develop in the future to a degree which would require the supervision or protection of the United States.

While on account of its interstate character the stream might be technically construed as "suitable for use in the transportation of persons or property in interstate commerce" and therefore within the definition of "navigable waters," as contained in the Federal Water Power Act, it is not believed that the probability of future commerce is such, either in amount or in character, as to justify any exercise of jurisdiction over the stream by the Federal Power Commission or a finding that the section of stream involved is "navigable waters" as defined in the Federal Water Power Act. It is further believed that the interests of interstate or foreign commerce would not be affected by the proposed projects.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Menominee and Marinette Light and Traction Co., of the States of Michigan and Wisconsin, to maintain and operate an existing power dam in the Menominee River about 22 miles above its mouth, in Menominee County, Mich., and Marinette County, Wis., for the purpose of developing power: The Commission having caused investigation of the project to be made, and it appearing upon investigation that said Menominee River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed project would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed project.

In the matter of the application for a preliminary permit made by the White Rapids Paper Co., of Oshkosh, Wis., to construct a power dam at a point in the Menominee River in Menominee County, Mich., and Marinette County, Wis., about 4 miles west of Swanson, Mich., for the purpose of developing power: The Commission having caused investigation of such proposed construction to be made, and it appearing upon investigation that the said Menominee River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

5. With respect to the declaration of intention of the Clark Power Co. affecting the Saco River, Me., the executive secretary stated that from the report of the district engineer of the War Department it appears that the Saco River is an interstate stream flowing from New Hampshire into Maine and thence into tidewater at Saco and Biddeford. Above these two cities the river is incapable of carrying boat navigation. It is and has been used to a considerable degree, however, for the floating of lumber and logs, particularly pulp wood, to the sawmills and pulp mills along the river. A part of this traffic originates in New Hampshire and ends in Maine. The stream, therefore, is used to a certain degree "for the transportation of \* \* \* property in interstate \* \* \* commerce," and could be construed technically as "navigable waters" within the definition of the Federal Water Power Act.

The stream is extensively used for power development and is obstructed by many power dams. Such obstructions, however, do not interfere with the floating of logs, for which character of navigation alone the river is suitable. Under the laws of the State of Maine the right of all persons to make use of the river for floating logs is amply protected and it is unnecessary for the Federal Government through any of its agencies to intervene to protect this right. It is therefore believed that the interests of interstate or foreign commerce would not be affected by the construction of the proposed dam and that the interstate transportation of property upon the stream is not sufficient in amount or in character to justify a finding by the Commission that the Saco River at the point of the proposed development is "navigable waters" of the United States as defined in the Federal Water Power Act and therefore within the jurisdiction of the Commission.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Clark Power Co., of Biddeford, Me., to construct a dam across and in Saco River at Union Falls, York and Cumberland Counties, Me., the Commission having caused investigation of such proposed construction to be made, and it appearing upon such investigation that said Saco River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

6. With respect to the declaration of intention of the Northeastern Power Co. to construct a power dam across the Peshtigo River, Wis., the executive secretary reported that the Commission had already acted upon similar declarations on this stream, but since the Commission under the provisions of the act could make definite findings only with respect to specific cases, it was necessary to present each individual proposal for action notwithstanding the fact that other decisions of the Commission had made it clear that no interests of interstate or foreign commerce were involved.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Northeastern Power Co., of Milwaukee, Wis., to construct dams across and in the Peshtigo River, at Johnston Falls and at Spring Rapids, Marinette County, Wis., for the purpose of developing power; the Commission having caused an investigation of such proposed construction to be made, and it appearing upon such investigation that said Peshtigo River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

*Restorations to entry.*

The executive secretary submitted 12 applications for restoration to entry under section 24 of the Federal Water Power Act upon which action was taken as follows:

1. Upon consideration of the application of the Hutchinson Lumber Co. (E, Power Reserves, California, DA-9) for right of way for a tramroad extending from NW.  $\frac{1}{4}$  sec. 32, T. 20 N., R. 5 E., to a point on the east boundary of sec. 14, T. 20 N., R. 6 E., Mount Diablo meridian, California, said right of way affecting certain lands of the United States reserved for power purposes, under the act of June 25, 1910 (36 Stat., 847), and under the Federal Water Power Act, it was voted that the Commission determines that the value of such lands so reserved as are affected by said right of way as shown on a map filed in the United States Land Office at Sacramento, Calif., February 21, 1922, said map being part of an application (Sacramento 013803) filed by the Hutchinson Lumber Co. for said right of way, will not be injured or destroyed for the purposes of power development by location thereon as contemplated by said application, provided that the authorization conferred by the approval of said application is limited to a term of not more than 25 years, and is subject to the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

2. The Acting Assistant Commissioner of the General Land Office, Washington, D. C., having filed a request (E, Power Reserves, California, DA-36) for a determination to be made with respect to the following-described lands, three acres in area, which are included in the homestead application of Elizabeth M. Carlaw (Sacramento 014113):

All portions of the following-described lands lying within 50 feet of the center line of the transmission line location of the Pacific Gas & Electric Co.

Mount Diablo meridian, California:

T. 1 S., R. 15 E., sec. 26, lots 15 and 16,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. James A. Marrs, Texas Creek, Colo., having filed an application (E, Power Reserves, Colorado, DA-19), for a determination to be made with respect to the following-described lands, 480 acres in area, near Arkansas River, Colo.:

New Mexico principal meridian:

T. 48 N., R. 12 E., sec. 14, SW.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; sec. 22, E.  $\frac{1}{4}$  E.  $\frac{1}{4}$ ; sec. 23, NW.  $\frac{1}{4}$ , N.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$ , SW.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

4. M. B. Carnefix, Riggins, Idaho County, Idaho, having filed an application (E, Power Reserves, Idaho, DA-48) for a determination to be made with respect to the following-described lands, 170 acres in area, near Salmon River, Idaho:

Boise meridian, Idaho:

T. 24 N., R. 1 E., sec. 18, lots 1, 2, 3, 4,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said

lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

5. Frank D. Marker, Challis, Idaho, having filed an application (E, Power Reserves, Idaho, DA-51) for a determination to be made with respect to the following-described lands, 127.44 acres in area, near Salmon River, Idaho:

Boise meridian, Idaho:

T. 11 N., R. 18 E., sec. 22, lots 1, 2, 3, 4,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

6. Earnest Wornek, Challis, Idaho, having filed an application (E, Power Reserves, Idaho, DA-50) for a determination to be made with respect to the following-described lands, 84.40 acres in area, near Salmon River, Idaho:

Boise meridian, Idaho:

T. 16 N., R. 20 E., sec. 24, lot 9; sec. 25, lots 1 and 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

7. The Commissioner of the General Land Office, Washington, D. C., having filed an application (E, Power Reserves, Oregon, DA-43) for a determination to be made with respect to the following-described lands, 80 acres in area near Willamina Creek, Oreg.:

Willamette meridian, Oregon:

T. 4 S., R. 6 W., sec. 18, W.  $\frac{1}{2}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

8. Al Bailey, Spray, Wheeler County, Oreg., having filed an application (E, Power Reserves, Oregon, DA-24) for a determination to be made with respect to the following-described lands, 320 acres in area, near John Day River, Oreg.:

Willamette meridian, Oregon:

T. 10 S., R. 26 E., sec. 7, SW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 18, W.  $\frac{1}{2}$  NE.  $\frac{1}{4}$ , E.  $\frac{1}{2}$  W.  $\frac{1}{2}$ , NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

9. Bertha Swesey, Mitchell, Oreg., having filed an application (E, Power Reserves, Oregon, DA-8) for a determination to be made with respect to the following-described lands, 200 acres in area, near John Day River, Oreg.:

Willamette meridian, Oregon:

T. 9 S., R. 22 E., sec. 32, SW.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ; T. 10 S., R. 22 E., sec 6, E.  $\frac{1}{2}$  NW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

10. Upon consideration of the application of the Portland Railway, Light & Power Co. (E, Power Reserves, Oregon, DA-48) for a right of way for a wagon road across the following power site reserve lands:

Willamette meridian, Oregon:

T. 4 S., R. 4 E., sec. 13, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ; T. 4 S., R. 5 E., sec. 7, lot 3, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of such lands so reserved as are affected by said right of way—as shown on a map entitled: "Portland Railway Light and Power Company, Portland, Oregon, Oak Grove Project, Map of wagon road on lands of United States under the jurisdiction of the Dept. of the Interior in section 7, T. 4 S., R. 5 E., and section 13, T. 4 S., R. 4 E. of the W. M., State of Oregon, County of Clackamas," which was filed in the United States land office at Portland, Oreg., on January 18, 1922—will not be injured or destroyed for the purposes of power development by location thereon as contemplated by said application, under and subject to the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

11. Ivan Linsin, Pinedale, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-13) for a determination to be made with respect to the following-described lands, 320 acres in area, near Pine Creek, a tributary of New Fork River:

Sixth Principal meridian, Wyoming:

T. 34 N., R. 109 W., sec. 22, SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , NE.  $\frac{1}{4}$  SE  $\frac{1}{4}$ , S.  $\frac{1}{4}$  SE  $\frac{1}{4}$ ; sec. 26, NW  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , N.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ; sec. 27, NE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purpose of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

12. Upon consideration of the application of the Commissioners of Hot Springs County, Wyo. (E. Power Reserves, Wyoming, DA-15), for a permit under the act of March 3, 1901 (31 Stat., 1056), to construct a highway across certain Indian lands and power-site reserve lands in Ts. 6 and 7 N., R. 6 E., Wind River meridian, it was voted that the Commission determines that the value of such lands as are involved in said application—as shown on a map entitled "Map, Showing Proposed Location, State Highway, on Indian Reservation in Hot Springs County, Oct. 20, 1921," and filed with the Secretary of the Interior, by the county and prosecuting attorney of Hot Springs County, on October 24, 1921—will not be injured or destroyed for the purposes of power development by the construction of said highway: *Provided*, That the permit to be issued by the Secretary of the Interior be made subject to the following stipulation in addition to the provisions of section 24 of the Federal Water Power Act:

That the county of Hot Springs, as represented by its commissioners, shall, upon demand of the United States, at its own cost and expense and without claim for compensation, reimbursement, or damage, change the location of so much of said highway for which permit is requested as shall traverse lands in power-site reserve to the extent found necessary by the United States in order that the construction or operation of the said highway shall not be incompatible with the construction or operation of any future power project authorized by the United States in pursuance of the provisions of the Federal Water Power Act. Notification by the United States to the county that such power project has been authorized shall be deemed a revocation of the permission to construct

or use the said highway across the lands in power-site reserve to the extent that such construction and operation is found to be incompatible with the full utilization of the said lands for the purposes of the Federal Water Power Act.

*Miscellaneous.*

The executive secretary presented two telegrams, one favoring the proposed power development by James B. Girand at Diamond Creek on the Colorado River, Ariz., and the other opposing the passage of the Swing-Johnson bill for power development at Boulder Canyon, both telegrams being from the Bisbee, Ariz., Chamber of Commerce. The Commission deferred action on these telegrams pending a study by the Commission of the Colorado River situation.

The meeting adjourned at 4.12 p. m.

O. C. MERRILL, *Executive Secretary.*

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THIRTY-FIFTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
JUNE 29, 1922.

Meeting called to order at 3.15 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. Wm. Kelly, chief engineer; and Maj. Lewis W. Call, chief counsel.

*Preliminary permits.*

1. The chief engineer explained to the Commission the features of the Colorado River with respect to power and irrigation developments, particularly the relation of the proposed power development of James B. Girand (project No. 121) at Diamond Creek to the proposed Boulder Canyon project of the Reclamation Service. After discussion, action on the application of James B. Girand was taken as follows:

In the matter of the application of James B. Girand, of Phoenix, Ariz. (project No. 121), for an extension from July 19, 1922, to July 19, 1923, of the period of the preliminary permit issued by the Federal Power Commission to said James B. Girand on July 19, 1921, for a power project for the development of water power on the Colorado River at the mouth of Diamond Creek, Mohave County, Ariz., such extension being desired in view of the action of the Commission at its meeting on April 17, 1922, in suspending, for the present, consideration of all applications for power development on the Colorado River; it appearing that an extension of the period of the permit is reasonable and necessary, it was voted that the period of said preliminary permit be extended for three months from July 19, 1922.

2. In the matter of the application of the State of Illinois (project No. 287) for a preliminary permit and license for a power project on the Fox River, a navigable waterway of the United States, in La Salle County, Ill., involving the construction of a dam and power house with appurtenant works, said State having submitted satisfactory evidence of its right to perform the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, and full opportunity having been given for all interested parties to be heard; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, it was voted that preliminary permit be issued for a period of

two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the special condition that if license is issued, it shall provide that if the licensee does not include in the project works such structures as are necessary to preserve or improve navigation facilities, then whenever the United States shall desire to complete such navigation facilities the licensee shall convey to the United States, free of cost, such of its land and its rights of way and such right of passage through its dams or other structures and permit such control of pools as may be required to complete such navigation facilities.

*Restorations to entry.*

The executive secretary presented five applications for restorations to entry under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. Charles D. Deardorff, of Aukum, Calif., having filed an application (E, Power Reserves, California DA-37) for a determination to be made with respect to the following-described lands, 160 acres in area, near Cosumnes River, Calif.:  
Mount Diablo meridian, California.

T. 8 N., R. 11 E., sec. 5, lot 1, SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ ; T. 9 N., R. 11 E., sec. 32, E.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purpose of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. The Director of the Geological Survey, Washington, D. C., having filed a request in the interest of Walter A. Milbury (address care Cortner Lumber Mills, Badger, Calif.) (E, Power Reserves, California, DA-34) for a determination to be made with respect to the following described lands, 640 acres in area, adjacent to North Fork Kaweah River:

Mount Diablo meridian, California:

T. 15 S., R. 28 E., sec. 22, all,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purpose of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. The Director of the Geological Survey having filed a request (E, Power Reserves, Colorado, DA-29) for a determination to be made with respect to the following-described lands, 120 acres in area, adjacent to Gunnison River, in the interest of Blanche Johnson (serialized Colorado 23399):

New Mexico meridian Colorado:

T. 49 N., R. 4 W., sec. 32, NE.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ; sec. 33, N.  $\frac{1}{4}$  SW.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. Burleigh Binning, Pinedale, Wyo., having filed an application (E, Power Reserves, Wyoming, DA-16) for a determination to be made with respect to the following described lands, 321.20 acres in area, near Lake Creek, a tributary of New Fork River:

Sixth principal meridian, Wyoming:

T. 35 N., R. 109 W., sec. 19, lots 4 and 6, SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ; T. 35 N., R. 110 W., sec. 24, SE.  $\frac{1}{4}$  NE.  $\frac{1}{4}$ , SE.  $\frac{1}{4}$ .

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purpose of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

5. Earl S. Brooks and Andrew W. Grimes having filed an application (E. Power Reserves, Colorado DA-30) for a right of way for an irrigation ditch and reservoir across the following power-site reserve lands near Grand River, Colo.:

Sixth principal meridian, Colorado:

T. 2 S., R. 84 W., sec. 1, lots 14 and 17,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of such lands so reserved as are affected by said right of way as shown on a map entitled: "Map of the Grimes-Brooks Ditch & Reservoir. Width of Ditch at High-Water Line 4 Ft., Capacity of Reservoir 178.7 acre Ft., Routt County, Colorado," which was filed in the United States Land Office at Glenwood Springs, Colo., January 13, 1921, will not be injured or destroyed for the purpose of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act (41 Stat., 1063).

The meeting adjourned at 3.45 p. m.

O. C. MERRILL, *Executive Secretary.*

THIRTY-SIXTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
JULY 20, 1922.

Meeting called to order at 4.05 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. Wm. Kelly, chief engineer; Edward C. Bebb, assistant engineer; C. E. Oakes, assistant engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of June 23 and June 29, 1922, was approved.

The executive secretary presented a list of six applications received since the meeting of June 23, 1922.

The executive secretary stated that three projects have been advertised since the meeting of June 23, 1922, and that two declarations of intention have been filed.

The executive secretary reported that during its second year there have been filed with the Commission applications aggregating a net total of six million horsepower of proposed installations and that this amount, added to the applications of the preceding fiscal year, makes a grand total of 321, involving in excess of 20 million horsepower. He also reported that final action has been taken on more than half of the applications for permits and licenses, of which 118 were disposed of during the last year. Decisions have been rendered during the year upon 22 declarations of intention, restorations to entry have been passed upon in 163 cases, and withdrawals of 675,000 acres of public lands have been made in connection with applications for power projects.



Up to June 30, 1922, the Commission had authorized 60 preliminary permits and 49 licenses, of which 18 were for transmission lines. The 58 permits now outstanding involve an estimated installation of 2,386,000 horsepower and the 31 licenses for power projects 1,932,000 horsepower, or a total of 4,318,000 horsepower. Of the projects covered by the 31 licenses, 17, involving an estimated installation when completed of 1,630,000 horsepower, were either completed or under construction at the close of the fiscal year. This is 25 per cent more than was constructed under Federal authorization in the 20 years preceding the passage of the Federal Water Power Act.

The executive secretary presented a list of licenses, amendments to licenses and other instruments pertaining to licensed projects which have been accepted and issued during the fiscal year ending June 30, 1922, recommending that the action of the executive secretary in issuing the instruments pursuant to authority in each case given by the Commission be approved. The executive secretary was instructed that when an instrument of the character under consideration has been issued and accepted the matter should be presented to the Commission for ratification at the next meeting of the Commission following such issuance. Action was taken by the Commission on the recommendation of the executive secretary as follows:

In order that the minutes of the Commission may contain record of the formal approval by the Commission of all licenses, amendments thereof or other instrument affecting the same, executed and issued by the executive secretary under authority of paragraph 8 of the Commission's Orders, No. 2 of August 23, 1920, it was voted that the following licenses, amendments of licenses and approval of lease and assignment, accepted and, or issued on the dates respectively named, be and the same are hereby approved by the Commission:

*Licenses for transmission lines.*

**Project No. 144:**

Idaho Power Co.  
Transmission line.  
Fort Hall Indian Reservation.  
Bingham and Bannock Counties, Idaho.  
Accepted on October 14, 1921.  
Issued on November 12, 1921.

**Project No. 150:**

Central Arizona Light & Power Co.  
Transmission line.  
Prescott National Forest.  
Yavapai and Maricopa Counties, Ariz.  
Accepted April 14, 1922.  
Issued May 1, 1922.

**Project No. 180:**

Pacific Gas & Electric Co.  
Transmission line.  
Nevada and Yuba Counties, Calif.  
Accepted on December 21, 1921.  
Issued on January 6, 1922.

**Project No. 181:**

Pacific Gas & Electric Co.  
Transmission line.  
Tahoe National Forest.  
Placer and Nevada Counties, Calif.  
Accepted on December 21, 1921.  
Issued on January 6, 1922.

**Project No. 198:**

Boston & Montana Milling & Power Co.  
Transmission line.  
Beaverhead National Forest.  
Beaverhead County, Mont.  
Accepted on September 2, 1921.  
Issued on September 15, 1921.

**Project No. 245:**

Darwin Silver Co.  
Transmission line.  
Inyo County, Calif.  
Accepted on February 21, 1922.  
Issued on March 9, 1922.

**Project No. 255:**

Southern Sierras Power Co.  
Transmission line.  
Angeles National Forest.  
San Bernardino County, Calif.  
Accepted on November 7, 1921.  
Issued on November 19, 1921.

**Project No. 295:**

Black Mountain Telephone Corp.  
Transmission line.  
Boone National Forest.  
McDowell County, N. C.  
Accepted on June 10, 1922.  
Issued on June 26, 1922.

*Licenses for power projects.***Project No. 63:**

Alaska Endicott Mining & Milling Co.  
Beardslee River.  
Juneau Recording District, Alaska.  
Accepted on April 4, 1922.  
Issued on April 18, 1922.

**Project No. 70:**

Rock Creek Power Co.  
Rock Creek.  
Missoula National Forest.  
Granite County, Mont.  
Accepted on August 22, 1921.  
Issued on August 29, 1921.

**Project No. 77:**

Snow Mountain Water & Power Co.  
Eel River.  
California National Forest.  
Lake County, Calif.  
Accepted on April 7, 1922.  
Issued on April 15, 1922.

**Project No. 78:**

Western States Gas & Electric Co.  
South Fork American River.  
Eldorado National Forest.  
Eldorado County, Calif.

**Project No. 78—Continued.**

Accepted on December 27, 1921.

Issued on December 29, 1921.

**Project No. 94.**

Alaskan-American Paper Corp.

Orchard Lake.

Tongass National Forest.

Head of Shrinup Bay, Revillagigedo Island, Alaska.

Accepted on October 14, 1921.

Issued on October 14, 1921.

**Project No. 108:**

Wisconsin-Minnesota Light &amp; Power Co.

Chippewa River.

Lac Court Oreilles Indian Reservation.

Sawyer County, Wis.

Accepted on August 5, 1921.

Issued on August 8, 1921.

**Project No. 120:**

Southern California Edison Co.

San Joaquin River.

Sierra National Forest.

Fresno and Madera Counties, Calif.

Accepted on June 2, 1922.

Issued on June 8, 1922.

**Project No. 130:**

Grace S. Eyre.

Chalk Creek.

Leadville National Forest.

Chaffee County, Colo.

Accepted on December 2, 1921.

Issued on December 12, 1921.

**Project No. 148:**

Charles S. Benefiel.

(Minor project.)

Chewaucan River.

Lake County, Oreg.

Issued on August 24, 1921.

**Project No. 166:**

McConnelsville-Malta Electric Co.

U. S. Dam No. 7.

Muskingum River, Ohio.

Accepted on August 13, 1921.

Issued on August 24, 1921.

**Project No. 184:**

El Dorado Power Co.

South Fork of American River.

Eldorado National Forest.

Eldorado, Alpine, and Amador Counties, Calif.

Accepted on February 20, 1922.

Issued on February 23, 1922.

**Project No. 185:**

Southern Sierras Power Co.

Mill Creek.

Angeles National Forest.

**Project No. 185—Continued.**

San Bernardino County, Calif.  
Accepted on October 20, 1921.  
Issued on November 2, 1921.

**Project No. 206:**

George Inlet Packing Co.  
Beaver Falls Creek.  
Tongass National Forest, Alaska.  
Accepted on June 24, 1922.  
Issued on July 17, 1922.  
(Minor project.)

**Project No. 213:**

J. H. Cann.  
(Minor project.)  
Tongass National Forest, Alaska.  
Accepted on March 28, 1922.  
Issued on April 11, 1922.

**Project No. 236:**

Blue Mountain Irrigation Co.  
Pole Canyon Creek.  
La Sal National Forest.  
San Juan County, Utah.  
Accepted on March 1, 1922.  
Issued on March 25, 1922.  
(Minor project.)

**Project No. 241:**

Freshwater Bay Lumber Co. (Inc.).  
Pavlof Harbor, Freshwater Bay, Alaska.  
Accepted on March 3, 1922.  
Issued on March 20, 1922.  
(Minor project.)

**Project No. 253:**

Henry Weber.  
Denny Creek.  
Leadville National Forest.  
Chaffee County, Colo.  
Accepted on October 19, 1921.  
Issued on November 2, 1921.

**Project No. 273:**

Peter F. Karst.  
Moose Creek.  
Gallatin National Forest.  
Gallatin County, Mont.  
Accepted on July 8, 1922.  
Issued on July 17, 1922.  
(Minor project.)

*Amendments to licenses.***Project No. 16:**

Niagara Falls Power Co.  
Niagara River.  
Niagara and Erie Counties, N. Y.  
Original license issued on March 2, 1921.  
Amendment accepted April 4, 1922.  
Amendment issued on April 7, 1922.

**Project No. 70:**

Rock Creek Power Co.  
Rock Creek.  
Missoula National Forest.  
Granite County, Mont.  
Original license issued on August 29, 1921.  
Amendment issued on June 28, 1922.

**Project No. 82:**

Alabama Power Co.  
Coosa River.  
Coosa and Chilton Counties, Ala.  
Original license issued on June 27, 1921.  
Amendment accepted on September 22, 1921.  
Amendment issued on September 24, 1921.

**Projects Nos. 67 and 110:**

Southern California Edison Co.  
San Joaquin River.  
Fresno County, Calif.  
Original license issued on March 3, 1921.  
Amendment accepted on October 17, 1921.  
Amendment issued on November 12, 1921.

**Project No. 174:**

Southern California Edison Co.  
Sequoia National Forest.  
Kern and Tulare Counties, Calif.  
Original license issued March 3, 1921.  
Amendment accepted October 17, 1921.  
Amendment issued on November 12, 1921.

*Approval of assignment.***Project No. 78:**

Western States Gas & Electric Co. to  
El Dorado Power Co.  
Eldorado National Forest.  
Eldorado County, Calif.  
License issued on December 29, 1921.  
Approval of assignment issued on March 28, 1922.

*Approval of lease and assignment.***Project No. 184:**

Lease from  
El Dorado Power Co. to  
Western States Gas & Electric Co.  
Assignment thereof by  
Western States Gas & Electric Co. to  
Girard Trust Co., trustee.  
License issued February 23, 1922.  
Approval of lease and assignment issued June 30, 1922.

*Licenses.*

The executive secretary presented two applications for licenses for transmission lines, upon which action was taken as follows:

1. Application of C. M. Eye, of San Francisco, Calif., for license for transmission line approximately 9,890 feet in length within the Stanislaus National Forest, Tuolumne County, Calif. The executive secretary stated that

the line is already in actual operation, having been constructed during October and November, 1921, under permit of the forest supervisor of the Stanislaus Forest; that the line was constructed for the purpose of bringing power from the forebay station of the Sierra Power Co., to the Contention mine, the property of the applicant; and that applicant has complied with the State and Federal laws which obtain in this case. In accordance with the recommendation of the executive secretary action thereon was taken as follows:

In the matter of the application of C. M. Eye, of San Francisco, Calif. (project No. 305), for a license for a transmission line and appurtenant structures on and across lands of the United States partly within the Stanislaus National Forest, Tuolumne County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (1), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures, the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (1), of said act, and subject also to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Stanislaus National Forest.

2. Application of the Colorado Power Co., of Denver, Colo., for license for the development of a project involving four transmission lines, all located partly within the Cochetopa National Forest and partly on the public domain without said forest, as follows:

The Eagle extension, approximately 3.29 miles in length.

The Express extension, approximately 1.69 miles in length.

The Queen City extension, approximately 1.84 miles in length.

The Saguache extension, approximately 14.16 miles in length.

The executive secretary stated that the Eagle, Express and Queen City extensions are already constructed and operating under a preliminary permit from the Forest Service; that the construction of the Saguache extension will commence upon receipt of license and will make available electric power and light in the town of Saguache and mine in that vicinity. In accordance with his recommendation action thereon was taken as follows:

In the matter of the application of the Colorado Power Co., of Denver, Colo. (project No. 321), for a license for a transmission line and appurtenant structures on and across lands of the United States partly within the Cochetopa National Forest, Saguache County, Colo., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having under the authority of section 10, subsection (1), of the Federal Water Power Act waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of Colorado as required by section 9, subsection (b), of said act, and of its ability to finance the construction of said line and structures, the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the

license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i), of said act, and subject also to the special condition that there shall be paid to the United States Department of Agriculture such rental charges and such damages to timber or other property of the United States as may have accrued to the date of execution of license and are payable in accordance with the rules and regulations of the Secretary of Agriculture.

*Extension of preliminary permit.*

The executive secretary stated that the Pitt River Power Co., which holds a preliminary permit issued March 3, 1921, for project No. 9, has applied for an extension of the period of the permit to March 2, 1924; that the applicant states that it has expended approximately \$400,000 in making surveys, in drilling explorations for dam foundation, and in securing title to land which will be overflowed; that the applicant was organized in 1918 during a period of serious power shortage in northern California; that this shortage of power has been largely eliminated by recent developments of the operating utilities so that it will be necessary for a new concern entering the field to develop its own market; that the applicant has not had sufficient time to do this; but that there appears to be little doubt of the financial ability of the applicant to make the development. In accordance with his recommendation, the following action was taken:

In the matter of the application of the Pitt River Power Co. of San Francisco, Calif., to which a preliminary permit for project No. 9, California, was issued on March 3, 1921, to extend the time on or before which an application for license must be filed, from October 1, 1922, to March 2, 1924, such extension being desired in order to enable the permittee to develop a market for the power and to complete surveys and prepare plans and specifications to be incorporated in the license; it appearing that extension of the time to January 1, 1924, within which application for license shall be submitted is reasonable and necessary, it was voted that the date on which application for license shall be submitted be extended to January 1, 1924, and that the executive secretary be authorized to issue a formal written instrument evidencing such action.

*Declarations of intention.*

The executive secretary presented two declarations of intention submitted under section 23 of the Federal Water Power Act, upon which action was taken as follows:

1. With respect to the declaration of the Grafton-Caledonia Power Co., affecting the Connecticut River in New Hampshire and Vermont, the district engineer of the War Department reports that the Connecticut River is an interstate stream rising in the Connecticut Lakes in northern New Hampshire and flowing southward between New Hampshire and Vermont and across Massachusetts and Connecticut into Long Island Sound. The river has been improved for navigation from its mouth to Holyoke, Mass. There are existing on the river 14 dams used for power development, only the lower of which has facilities at present for passing navigation. Above Holyoke, there is some small-boat navigation in the pools created by these dams, but no through navigation. The only commerce on the Connecticut River above Holyoke, at the present time, consists of floating of logs and pulp wood. This commerce of

logs and pulp wood is interstate in its nature, and will probably continue on the headwaters of the Connecticut River past the site of the proposed project of the Grafton-Caledonia Power Co. for at least 15 or 20 years more. The stream, therefore, is used to a certain degree "for the transportation of \* \* \* property in interstate \* \* \* commerce," and could be construed technically as "navigable waters," within the definition of the Federal Water Power Act. This portion of the stream is already used extensively for power development, but such power developments do not interfere with the floating of logs, for which character of navigation alone the river is suitable. The right to use the river for floating of logs is protected under the State law, and it is unnecessary for the Federal Government or any of its agencies to intervene to protect this right.

It is, therefore, believed that the interests of interstate or foreign commerce would not be affected by the construction of the proposed dam and that the interstate transportation of property upon the stream is not sufficient in amount or in character to justify a finding by the Commission that the Connecticut River at the point of the proposed development is "navigable waters" of the United States, as defined in the Federal Water Power Act.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Grafton-Caledonia Power Co., of New Hampshire, to construct a dam across and in Connecticut River in the vicinity of Fifteen Mile Falls, near Monroe, Grafton County, N. H., for the purpose of developing power, the Commission having caused investigation of such proposed construction to be made, and it appearing upon such investigation that said Connecticut River in said vicinity is not "navigable waters," as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

2. In the matter of the declaration of intention of the Flambeau Power Co., of Milwaukee, Wis., to construct a dam about 30 feet high in the Flambeau River, in sec. 33, T. 41 N., R. 1 E., fourth principal meridian, in Ashland County, Wis., the report from the district engineer of the War Department shows that the Flambeau River is a tributary of the Chippewa River above Eau Claire, Wis. No improvement for navigation has been made by the United States on the Flambeau River, but the Chippewa River has been improved from Eau Claire to its mouth. Consideration was given at one time to a scheme for improving navigation on the Chippewa and Mississippi Rivers by increasing the low-water flow through construction of reservoirs at the headwaters of the Flambeau River, but such scheme has never been adopted. The proposed project is about 162 miles by river above the present head of navigation on the Chippewa. In former years the Flambeau River was used for running logs, but construction of railroads has caused the discontinuance of use of the river for log driving. There are already several fixed dams between the head of navigation and the proposed project. The Commission, at its meeting of June 23, 1922, found that the dam proposed at Jim Falls on the Chippewa River, which is between the head of navigation on that river and the project proposed on the Flambeau, would not affect the interests of interstate or foreign commerce. There appears less reason why the proposed project should affect the interests of interstate or foreign commerce, and it is recommended that the Commission so find.

The Commission thereupon took the following action:

In the matter of the declaration of intention of the Flambeau Power Co., of Milwaukee, Wis., to construct a dam across and in Flambeau River in sec.



33, T. 41 N., R. 1 E., fourth principal meridian, Ashland County, Wis., for the purpose of developing power: The Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that said Flambeau River in said vicinity is not "navigable waters" as defined in the Federal Water Power Act, and that such proposed construction would not affect the interests of interstate or foreign commerce, it was voted that the Commission finds that the interests of interstate or foreign commerce would not be affected by such proposed construction.

#### *Restorations to entry.*

The executive secretary presented three applications for restorations to entry under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. Sidney T. Aldous, of Siuslaw, Oreg., having filed an application (E, Power Reserves, Oregon, DA-30) for a determination with respect to the following-described lands, 40 acres in area, near Wolf Creek and Siuslaw River:

Willamette meridian, Oregon:

T. 18 S., R. 8 W., sec. 35, NW.  $\frac{1}{4}$  SE.  $\frac{1}{4}$ ,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Jack Mann, of Mapleton, Oreg., having filed an application (E, Power Reserves, Oregon, DA-19) for a determination with respect to the following-described lands, 18.88 acres in area, adjacent to Siuslaw River:

Willamette meridian, Oregon:

T. 17 S., R. 10 W., sec. 24, lot 4,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. John L. Chamberlin, of Riggins, Idaho, having filed an application (E, Power Reserves, Idaho, DA-55) for a determination to be made with respect to the following-described lands, 78.48 acres in area, near Salmon River, Idaho:

Boise meridian, Idaho:

T. 24 N., R. 1 E., sec. 10, lot 7; sec. 14, lot 3,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

#### *Legal opinions.*

The executive secretary presented three opinions of the chief counsel, as follows:

1. An opinion (L, Opinions, Permits, Licenses) rendered upon the questions whether:

(a) If a preliminary permit is first issued and such permit is to be followed by license, can conditions be inserted in the license which were not expressed directly or indirectly in the preliminary permit?

(b) If a preliminary permittee has complied with all the provisions, directly or indirectly expressed in his permit, which are conditions precedent to issuance of license, and if he also is willing to accept a license containing all the provisions, directly or indirectly expressed in his permit, which are to be conditions of such license when issued, has the Commission authority to refuse to issue a license or to make its approval conditional upon acceptance of other or additional provisions?

The executive secretary stated that in order to determine how far it is necessary to specify in preliminary permits the conditions affecting maintenance of priority, it is necessary to know to what extent, if any, a permit may be modified after issue and whether compliance with the terms of a permit gives the permittee a legal right to a license. It is assumed that no permit will be legal which is in conflict with the specific provisions of the act. One of the principal provisions in this connection is that the Commission has at all times up to the date of approval of license the authority to require any modification in the general or detail plans of a project which in its judgment are desirable. Having this fundamental authority, little would be gained by holding that a license might be refused to a permittee who was willing to conform his plans to the wishes of the Commission. On the other hand, no permittee could afford to incur the heavy expenses often involved in preliminary investigations if his license could be denied on grounds not expressed in the law or in his permit. Such a course would, in fact, render a preliminary permit useless. This very question was specifically considered when the Federal Water Power Act was being proposed, and the words "and a license issued" were placed at the end of the second sentence of section 5 for the specific purpose of giving a permittee the right to a license if he complied with the conditions expressed and implied in his permit.

The chief counsel, in his opinion, holds that a permittee is entitled to a license upon the conditions set forth either directly or indirectly in the preliminary permit; that the preliminary permit is issued in accordance with the provisions of the Federal Water Power Act and the regulations of the Commission issued thereunder; that these form a part of the preliminary permit; and that whatever conditions are prescribed in the statute or in the regulations, although not specifically set forth in the preliminary permit, are set forth by reference within the meaning of section 5 of the act.

The executive secretary stated that this opinion has been concurred in by the Solicitors of the Departments of Agriculture and Interior, but has not been concurred in by the Acting Judge Advocate General of the War Department.

Upon consideration of the matter the Commission directed that the opinion of the Attorney General be requested on the general questions covered by this opinion.

2. An opinion\* (L. Opinions, formal, Regulation 16, Depreciation Reserves) rendered upon the questions:

(a) Whether the authority of the Commission to prescribe rules for accounting for depreciation is, in fact, limited to the provisions of section 10, subsection (c) of the act; and if not, what are the limits of its authority:

(b) What is the meaning of the terms "depreciation" and "depreciation reserves" as used in the act; for what purpose or purposes was it intended that depreciation reserves should be established and maintained; and whether

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\* See Decisions of the Commission, p. 226.

the rules for accounting for depreciation as contained in Regulation 16 are consistent with the act, and with other legislation of Congress, and necessary and proper for the purpose of carrying out the provisions of the act; and

(c) Whether the definition of "depreciation" as proposed by representatives of the National Electric Light Association and the proposed methods of accounting therefor are consistent with the act and if adopted by the Commission would make it possible to carry out the provisions of the act?

The executive secretary stated that these questions had arisen on account of certain claims made by representatives of the National Electric Light Association at a hearing before the Commission November 21, 1921, that the regulations of the Commission now in effect exceed the authority of the Commission and are not in conformity with the provisions of the Federal Water Power Act. He stated that in view of the fact that the regulations had been attacked on the grounds both of law and of policy it had seemed desirable to secure a legal interpretation of the requirements of the act and of the powers of the Commission with respect to depreciation; that accordingly a careful study of the act, of similar State statutes, and of decisions of State courts and commissions had been made; that the National Electric Light Association and the National Association of Railway and Utilities Commissioners had been invited to submit briefs and had done so; that these briefs, together with the opinion of the chief counsel, had been submitted to the chief law officers of the three departments; that the opinion of the chief counsel had been concurred in by the Solicitor of the Department of Agriculture and by the Acting Judge Advocate General of the War Department; and that he had been informed that the opinion also had been concurred in by the Solicitor of the Interior Department.

The chief counsel, after reviewing the use of the word "depreciation" in other provisions of the act and in Federal statutes *in pari materia* and as defined in decisions of Federal courts and Federal and State commissions, holds that the primary purpose of accounting for depreciation under the Federal Water Power Act is that reserves may be established and maintained sufficient for offsetting the reduction in service value due to accruing depreciation from whatever cause, and for maintaining the original investment unimpaired and adequate for renewing and replacing, so far as respects their original costs, units of equipment or structures when their useful lives expire. He is of opinion that the act requires an accounting for depreciation substantially as set forth in the existing regulations of the commission; that such regulations are not inconsistent with the act, but on the contrary are necessary and proper for the purpose of carrying out the provisions of the act; and that the definition of depreciation as proposed by the representatives of the National Electric Light Association and the amendment of the regulation proposed by them with respect to accounting for depreciation are not in conformity with the act, and if adopted would not make it possible to carry out the provisions of the act.

The executive secretary further stated that he was not convinced that the provisions of the act with respect to depreciation were in conformity with the wisest public policy, or would be in the best interests of rate payers in the long run; that he believed the question should be approached primarily from this standpoint; and that if upon further consideration it should appear unwise to require the full accrued depreciation to be taken up on the licensee's accounts, steps should be taken to secure an amendment of the act. Unless and until the act is amended he recommended that Regulation 16 be amended so that it shall be optional with licensees whether they

account for depreciation on the "straight line" or the "sinking fund" basis; and that the executive secretary be authorized to confer with the water power development committee of the National Electric Light Association, or other interested parties, with a view to presenting to the Commission proposals for such a degree of flexibility in annual charging of accruing depreciation as will give due consideration to the maintenance both of the financial credit and of the capital assets of the licensee.

The Commission deferred action on this opinion until its next meeting.

3. An opinion<sup>1</sup> (L, Opinions, formal, Regulation 20, Accounts and Reports) rendered upon the questions:

(a) Whether, under the provisions of section 4, subsection (f) of the act, it is within the discretion of the Commission to prescribe or not to prescribe a system of accounts, or to require or not to require the submission of reports and statements as therein specified?

(b) What is the limitation placed upon the Commission in prescribing "rules and regulations for the establishment of a system of accounts, and for the maintenance thereof by licensees" by the provisions contained in the definition of "net investment" in section 3 of the act, namely, "said classification of investment of the Interstate Commerce Commission shall in so far as applicable be published and promulgated as a part of the rules and regulations of the Commission?"

(c) What would be the effect, if any, of said provision, or other provisions of the act, upon the authority of the Commission to adopt *in toto* the system of accounting recommended by a committee of the National Association of Railway and Utilities Commissioners?

The executive secretary stated that these questions also had arisen on account of claims made by the National Electric Light Association at the hearing on November 21, 1921; that it similarly had seemed desirable to have a legal interpretation of the powers and duties of the Commission with respect to prescribing a system of accounts for its licensees; that a careful study had been made of the act, of similar State statutes, of decisions of courts and commissions, and particularly of the debates in Congress while the accounting provisions of the act were under discussion; that briefs had been submitted by the National Electric Light Association and the National Association of Railway and Utilities Commissioners, which briefs together with the opinion of the chief counsel had been submitted to the chief law officers of the three departments; that the opinion had been concurred in by the Solicitor of the Department of Agriculture and by the Acting Judge Advocate General of the War Department; and that he was informed that the opinion had been concurred in by the Solicitor of the Interior Department.

In his opinion the chief counsel cites authorities to show that permissive words of a statute conferring powers on a public officer are to be construed as peremptory where the power to be exercised concerns the public interest if such construction will carry into effect the intent and object of the statute. He takes up in detail the several provisions of the act which make it necessary to establish a system of accounts and to require reports and statements giving the information necessary to enable the Commission to perform the duties imposed by the act, and quotes at length from the debates in the House when the act was under consideration, showing that it was the purpose to require the Commission to establish a system of accounts such as will show at any time the net investment in the project as defined in the act, and such as will

<sup>1</sup> See Decisions of the Commission, p. 244.

enable the Commission to carry out the duties imposed by the act. He also sets forth the points in respect to which the tentative draft of the National Association of Railway and Utilities Commissioners, which the Commission has been urged to adopt, fails to meet the requirements of the Federal Water Power Act.

The executive secretary stated that a draft of a system of accounts had been prepared more than a year ago; that conferences had been had with representatives of the National Electric Light Association and with licensees and prospective licensees of the Commission; that further action had necessarily been suspended pending a decision by the Commission upon the questions at issue; that the work of the Commission was being seriously delayed; and that it was, therefore, very desirable that the questions be settled. He further stated that in the preparation of an accounting system the draft of the National Association of Railway and Utilities Commissioners had been used as a basis; that such draft, however, did not conform in certain particulars to specific requirements of the Federal Water Power Act; and that it did not meet the desires of the utilities or State commissions in those States where the greater part of the business of the Commission will be found. He said that if the opinion of the chief counsel is approved he proposes to request once more a conference with representatives of the National Electric Light Association and of the National Association of Railway and Utilities Commissioners for such further suggestions as they may have. He recommended that no change be made in the text of regulation 20, "Accounts and Reports," but that the accounting system to be prescribed by the Commission be so drawn that, while conforming with the specific requirements of the act and with sound accounting practice, it shall be best adapted to meet the needs and wishes of licensees under the act and of State commissions having regulatory authority over such licensees.

The Commission deferred action on this opinion until its next meeting.

The Commission adjourned at 4.50 p. m.

O. C. MERRILL, *Executive Secretary.*

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THIRTY-SEVENTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
JULY 26, 1922.

Meeting called to order at 3.40 p. m.

Present: Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Col. William Kelly, chief engineer; C. E. Oakes, assistant engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of July 20, 1922, was approved.

The executive secretary presented a list of seven applications received since the meeting of July 20, 1922.

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With respect to the application of the City of St. Paul the executive secretary stated that this application is in conflict with the application of the Northern States Power Co., the advertisement of which has been completed and the case being ready to submit for the action of the Commission; that the application of the city is informal but is to be followed by a formal application; that no showing has been made that the city has the required authority to make the development applied for; and that the chief counsel has expressed an informal opinion to the effect that in the absence of express authority from the Legislature of the State of Wisconsin the city would be without power to acquire lands in that State for its purposes, particularly lands held by a public-utility corporation for the purpose of developing power for sale to the public.

The Commission thereupon voted that the City of St. Paul be notified to submit within 30 days, in connection with its formal application for the proposed development, evidence of its authority to expend money in the development and operation of power plants outside the State of Minnesota, and evidence of its authority to acquire property within the State of Wisconsin necessary for the purpose of making the power developments applied for.

The executive secretary stated that no projects had been advertised and that no declaration of intention had been submitted since the last meeting of the Commission.

#### *Licenses.*

The executive secretary presented three applications for license for transmission lines upon which action was taken as follows:

1. In the matter of the application of the Holton Power Co., of Riverside, Calif. (project No. 326), for a license for a transmission line and appurtenant structures on and across lands of the United States in Imperial County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of said act, the map and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i), of said act.

2. In the matter of the application of the Southern Sierras Power Co., of Cheyenne, Wyo. (project No. 327), for a license for a transmission line and appurtenant structures on and across lands of the United States in Inyo County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having submitted satisfactory evidence of its compliance with the laws of the State of California, as required by section 9, subsection (b), of said act, the map and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i), of said act.

3. In the matter of the application of the Bear Valley Utility Co., of San Bernardino, Calif. (project No. 329), for a license for a transmission line and appurtenant structures on and across lands of the United States within the Angeles National Forest, San Bernardino County, Calif., the Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i), of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act, said company having sub-

mitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of said act, the map and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired, it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i), of said act, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Angeles National Forest.

*Preliminary permits.*

The executive secretary presented four applications for preliminary permits, upon which action was taken, as follows:

1. The executive secretary stated that at its meeting of June 23, 1922, the Commission considered the application of the Spirit Lake Railway & Power Co., of Vancouver, Wash. (project No. 66), to develop power at the outlet of Spirit Lake, and decided to reject the application, together with that of C. I. Kephart for a conflicting project (project No. 168); that action in the case of the Spirit Lake Railway & Power Co. was suspended on account of the request of Dr. Joseph Roane, president of the company, for time to submit additional facts; that the additional facts were submitted on July 14, 1922, in the form of affidavit from various citizens; and that these statements are repetitions of statements heretofore made, are in conflict with the greater part of the testimony submitted and afford no adequate reason for changing the previous decision of the Commission in this case.

The Commission thereupon took the following action:

In the matter of the application of the Spirit Lake Railway & Power Co., of Vancouver, Wash. (project No. 66), for a preliminary permit and license for a power project on Toutle River, at the outlet of Spirit Lake, and on lands of the United States partly within the Columbia National Forest, in Skamania County, Wash., the company not having shown satisfactory financial ability to carry out the proposed project, and not having made a satisfactory showing of a prospective market for the power, the feasibility of the project being doubtful, and it appearing that the proposed project would interfere with the important recreational value of the lake, it was voted that said application be denied.

2 and 3. With respect to the applications of the Houston Power Co. (project No. 276) and A. E. Killebrew (project No. 267) the executive secretary stated that said company had applied for a proposed power development on the Choctawhatchee River, near Newton, Dale County, Ala.; that the proposed development will consist of a dam with a maximum head of 33 feet and a power house with appurtenant works; that the power developed will be used for public utility purposes in the villages and cities in the vicinity; that this application conflicts with an application by A. E. Killebrew (project No. 267) for a preliminary permit for a proposed power development on the same stream, approximately 3,500 feet above the Houston Power Co.'s project; that a hearing was held at Ozark, Dale County, Ala., by Maj. J. J. Loving, United States district engineer; that after reviewing the record of said hearing letters were written to the applicants, stating that from the standpoint of economic feasibility, ability to market power, and successfully to finance the project, and in

view of the unjustifiable public inconvenience if Mr. Killebrew's scheme of development were carried out, it was proposed to recommend that the application of A. E. Killebrew be denied and the application of the Houston Power Co. be granted.

The executive secretary further stated that Mr. Killebrew had been allowed 30 days in which to make any showing desired why the Commission should not act in accordance with the proposed recommendations; that he had filed a letter, dated June 29, 1922, with inclosures, showing certain correspondence with the Alabama Power Co., indicating an effort to contract for power to supply a projected transmission system in Alabama, Georgia, and Florida, and that the data filed were not considered as affording sufficient reason for changing the proposed action. It was therefore recommended that the application of A. E. Killebrew be denied and that the application of the Houston Power Co. be granted, subject to certain specified conditions.

The Commission thereupon took the following action:

In the matter of the application of the Houston Power Co., of Newton, Ala. (project No. 276), for a preliminary permit and license for a power project on the Choctawhatchee River, a navigable waterway of the United States, in Dale County, Ala., involving the construction of a dam in the Choctawhatchee River, with a power house and appurtenant works; said company having submitted satisfactory evidence of its right to perform within said State of Alabama the acts necessary for the purposes of such permit and of its ability to finance the preliminary work and the proposed project; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development and of other beneficial public uses; it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions:

(1) The licensee shall, unless a smaller amount be authorized by the Secretary of War, allow a minimum discharge past its dam of 500 cubic feet per second at all times when the pool is above the level of 20 feet below the crest of the dam. When the pool is at or below the level of 20 feet below the crest of the dam the full natural discharge of the river shall be released, whenever such discharge is less than 500 cubic feet per second; when it is greater, the excess above 500 cubic feet per second may be stored.

(2) If and when the United States shall provide for navigation over the section of the river above the proposed dam, the maximum allowable drawdown of the pool shall not exceed 20 feet unless otherwise authorized by the Secretary of War.

(3) The licensee shall build its dam to the maximum height economically feasible and shall, when application for license is made, present the facts necessary to determine what such height should be.

It was further voted that the application of A. E. Killebrew, of Newton, Ala. (project No. 267), for a preliminary permit, which conflicts with said application of the Houston Power Co., be denied.

4. With respect to the application of the Alaska Development & Mineral Co., of New York City, N. Y. (project No. 157), for an amendment of the permit issued March 1, 1922, for a power development on Tyee and Anan Creeks in the Tongass National Forest, Alaska, so as to include a development on White



River and adjacent watershed, the executive secretary stated that the desirability of including this site in the general scheme of development was recognized and reported favorably by the forester when the original application was under consideration, but that it was not included in the permit because of the failure of the applicant to include it in the application. He recommended that the permit be amended to cover the additional site.

The Commission thereupon took the following action:

In the matter of the application of the Alaska Development & Mineral Co., of New York City, N. Y., for an amendment to preliminary permit for project No. 157, issued to said company on March 13, 1922, to include a power project on the White River on lands of the United States within the Tongass National Forest, Bradfield Canal, Alaska, involving the construction of a dam on White River, a conduit and a power house with appurtenant structures; notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that neither the amendment to said permit applied for nor the issuance of license for said project will interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that the said preliminary permit be amended to include said proposed development on White River, Alaska, subject to the special condition that the permittee shall install simultaneously with the installation of stream gauges and stream-gauging stations as set forth in the original permit, a stream gauge and stream-gauging station on White River. It was further voted that the executive secretary be authorized to issue the necessary instrument for amendment of said permit.

*Restorations to entry.*

The executive secretary presented two applications for restoration to entry under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. August P. Culbertson, of Circle, Fremont County, Wyo., having filed an application (E. Power Reserves, Wyoming, DA-17) for a determination to be made with respect to the following described lands, 101.23 acres in area, near Wind River, Wyo.:

Wind River meridian, Wyoming:

T. 5 N., R. 6 W., sec. 11, lots 9 and 10; sec. 14, lots 1 and 2, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Ferdinand C. Alers, of Halfway, Baker County, Oreg., having filed an application (E. Power Reserves, Oregon, DA-50) for a determination to be made with respect to the following described lands, 48.40 acres in area, near Snake River, Oreg.:

Willamette meridian, Oregon:

T. 8 S., R. 48 E., sec. 30, lots 1 and 2, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the

said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

*Valuation—Niagara Falls Power Co.*

The executive secretary stated that data are being secured relative to the valuation of the existing plant of the Niagara Falls Power Co., in accordance with the provisions of section 23 of the Federal Water Power Act; that in connection with securing such data a request has been made upon the licensee for access to the books in its possession showing the cost of construction of the various properties by its constituent companies; that such access had been denied on behalf of the licensee on the ground that the information desired is irrelevant and that the Commission had no authority to make the examination desired; that the matter had been submitted to the chief counsel, who, in an informal opinion dated July 17, 1922, had held that the cost of construction is a factor in determining the fair value of a property, and is therefore relevant; and that the request for access to the records is within the authority of the Commission. It was voted by the Commission that the executive secretary be instructed to make demand upon the licensee for access to the records as requested.

*Legal opinions.*

The executive secretary presented opinions<sup>\*</sup> of the chief counsel on depreciation and on accounts and reports, and the recommendations with respect to amendment of the regulations on said subjects, which had been considered at the meeting of July 20, 1922, and upon which action had been postponed. After discussion the Commission voted to adopt the opinions of the chief counsel as decisions of the Commission and to approve the recommendations of the executive secretary with respect to amendments of Regulation 16, "Depreciation Reserves," and of Regulation 20, "Accounts and Reports," which had been presented at the meeting of July 20, 1922, said recommendations being as follows:

1. That Regulation 16, "Depreciation," be amended so that it will be optional with licensees whether they account for depreciation on the "straight-line" or the "sinking-fund" basis; and that the executive secretary be authorized to confer with the Water Power Development Committee of the National Electric Light Association, or other interested parties, with a view to presenting to the Commission proposals for such a degree of flexibility in annual charging of accruing depreciation as will give due consideration to the maintenance both of the financial credit and of the capital assets of the licensee.

2. That no change be made in the text of Regulation 20, "Accounts and Reports," but that the accounting system to be prescribed by the Commission be so drawn that while conforming with the specific requirements of the act and with sound accounting practice it shall be best adapted to meet the needs and wishes of the licensees under the act and of State commissions having regulatory authority over such licensees.

*Colorado River.*

The executive secretary presented for the consideration of the members of the Commission a report of the chief engineer on the best scheme of develop-

<sup>\*</sup> See Decisions of the Commission, pp. 226 and 244.

ment of the Colorado River below its junction with the Green. It was directed that a copy of this report be submitted to Secretary Hoover for his opinion and advice.

The report of the chief engineer is as follows:

**BEST SCHEME OF DEVELOPMENT OF COLORADO RIVER BELOW ITS JUNCTION WITH THE GREEN.**

**RÉSUMÉ.**

The best scheme of development of Colorado River below the junction of the Green is—

1. A power and storage dam at Black (or Boulder) Canyon with crest from 310 to 360 feet above present low water. Such a dam will provide the lower basin with immediate and effective flood relief and will meet its irrigation needs for at least 15 years to come. It will also furnish 225,000 kilowatts, or more, primary power which can be sold at a price to carry the entire project.

2. A power dam at Diamond Creek with crest about 250 feet above low water, to develop 187,500 kilowatts primary power.

3. A storage dam at Glenn Canyon (Lees Ferry) with crest about 400 feet above low water, to give about 8,000,000 acre-feet storage. This dam will give additional flood protection, additional flow for irrigation when needed, and will increase the primary power of the Black Canyon and Diamond Creek Dams by about 375,000 kilowatts. It will also increase the power and reduce the cost of any other dams that may be built below it.

The power dam at Diamond Creek probably should be constructed as the second or third step in the scheme of development, but the loss due to carrying charges, if it be built at once, will not be great, and there will be no loss at all if the completion of the Black Canyon Dam is not accomplished till after 1930. Moreover, should the foundations at Back Canyon prove to be as deep as at Boulder Canyon it may be economical to change the order and build Diamond Creek and Glenn Canyon Dams first.

**APPLICATIONS.**

The Federal Power Commission has before it 11 applications for preliminary permits for power development on Colorado River and tributaries at 21 different points. It has issued one preliminary permit on which an application for license has been filed by Mr. James B. Girand for power development at Diamond Creek. The Commission has suspended action on all applications except Mr. Girand's until report is made by Mr. Hoover's commission. Mr. Girand's permit has been extended to October 19, 1922, in order to give time to determine whether it is in accord with the best scheme of development. Exhibit No. 1 herewith is a general plan showing the Colorado and its tributaries and the location of projects applied for. Exhibit No. 2 is a profile showing the same.

**GIRAND LICENSE.**

The application of J. B. Girand for license makes urgent the consideration by the Federal Power Commission of the Colorado development at this time. Mr. Girand certainly has strong equities, if not rights, to have his license granted. He was granted a permit by the Interior Department, which was recognized by the Federal Power Commission as giving him priority, and he was accordingly issued a preliminary permit by the Federal Power Commission to maintain that priority. He has carried out all the terms of his preliminary permit and has expended over \$100,000 in securing the data necessary for his

application for license. He is being aided financially by the Arizona Copper interests who are planning to use the power in their mining operations. His plans are satisfactory, and his project, while it contributes little to other interests on the river, will fit the best scheme of development (as will be shown later) and will interfere physically with no other interest on the river. The Secretary of the Interior has announced his opposition to granting a license to Girand. His views, as publicly expressed, are embodied in the Swing bill, H. R. 11449. The Swing bill reserves the Colorado, from the junction of the Green down, for development by the Federal Government and shuts out all development by private interests. Practically, its effect is to take this section of the river out of the jurisdiction of the Federal Power Commission and to place it under the jurisdiction of the Secretary of the Interior with powers very similar to those conferred upon the Federal Power Commission. The Swing bill also contains an item appropriating \$70,000,000 for carrying out a flood protection project at or near Boulder Canyon and for constructing the "All American" high line canal to extend irrigation in Imperial Valley. The specific objection advanced by the Interior Department to granting the Girand license is that Girand's project, if built before the Interior Department Boulder (or Black) Canyon project, may absorb the power market to the detriment of the latter project.

#### BOULDER (OR BLACK) CANYON PROJECT—INTERIOR DEPARTMENT.

The Interior Department project is described in a recent publication by the Reclamation Service, entitled "Problems of the Imperial Valley and Vicinity" (Senate Doc. 142, 67th Cong., 2d sess.). Since its report was published it is understood that the Reclamation Service has changed the location of the proposed dam from Boulder Canyon to Black Canyon and that it is contemplating building the dam to a reduced height as a first step, with provision for raising it later to the full height.

Two projects are discussed in the original report; one providing complete regulation of the flow of the river and one nearly complete regulation. The former contemplates a dam with crest 600 feet above present low-water level, a storage capacity of 31,400,000 acre-feet, and a power development of 700,000 primary horsepower.

The latter contemplates a dam with crest 550 feet above present low-water level, a storage capacity of 26,500,000 acre-feet, and a power development of 600,000 primary horsepower.

It is proposed to operate the storage so as to limit the maximum flow in the Colorado River below the dam to 50,000 cubic feet per second for flood protection of the lower basin. This is the primary purpose of the project. It will increase the flow available for irrigation in the low-water season and will develop a large amount of power. The project is to be built and operated at the expense of the United States, but reimbursement is looked for from the lease or sale of the power. None of the expense of the storage reservoir is to be borne by the irrigation interests for whose benefit the project is designed. "Problems of the Imperial Valley and Vicinity" contains a great deal of valuable data, but does not discuss either the flood problem of the lower basin, the best scheme of developing power on the river, or the prospects of marketing power, except in very general terms.

From the power point of view there are two outstanding objections to the project.

First. It contemplates large expenditures to provide complete regulation of flow of the river at the bottom of the canyon section where no other power development can benefit from it.

**Second. Operation of a power plant under the variation of head proposed is difficult and not efficient. Building such a plant in steps means that the water wheels installed for the first step must be scrapped when the dam is raised or must be operated with loss of efficiency.**

The Federal Water Power Act charges the Commission with satisfying itself that projects licensed are in accordance with the scheme of development best adapted to conserve and utilize, in the public interest, the navigation and water resources of the region. An investigation has therefore been made as to what is the best scheme of development of the lower Colorado, considering all uses of the water.

#### DESCRIPTION OF COLORADO RIVER.

The Colorado rises in the State of Colorado a few miles west of Denver and flows generally southwest across Colorado and into Utah, where it is joined successively by the Green and the San Juan, its principal tributaries. It continues in the same general direction across the northwest corner of Arizona to the Nevada line, from which point it forms the boundary of Arizona, Nevada, and California down to the Mexican boundary. It crosses the Mexican boundary and finally discharges into the Gulf of California.

The Green River rises in Wyoming and flows generally south to its junction with the Colorado.

The San Juan rises in New Mexico and flows slightly north of west into the Colorado.

On account of its characteristics the Colorado naturally divides into three sections:

1. The upper basin, the section above the junction of the Green and including the drainage area of the Green. The upper basin contains considerable areas that may be irrigated; it has a number of good power sites and several reservoir sites of large capacity. It may be developed for both irrigation and power.

2. The middle, or canyon section, from the junction of the Green to the lower end of Black Canyon.

The river in this section lies at the bottom of a deep and narrow canyon; it offers excellent power possibilities and no opportunities for irrigation diversion. In this section there are two reservoir sites with large storage capacity; one at the upper end of the section at Glenn Canyon or Lees Ferry, and the other at the lower end of the section from Black Canyon to above Boulder Canyon.

3. The lower basin, the section below Black Canyon. The lower basin is important principally for its irrigation possibilities and is the only section that is as yet developed to any considerable extent.

The flow of the Colorado River at Yuma, Ariz., varies from about 3,000 cubic feet per second to 200,000 cubic feet per second.

The most urgent demands for immediate improvement of the Colorado in order of their importance are:

1. Protection of the irrigation developments in the lower basin from flood damage.

2. Supply of power for the copper mines in Arizona.

3. Increase of low-water flow for irrigation needs in the lower basin.

#### FLOOD PROTECTION FOR LOWER COLORADO BASIN IRRIGATION PROJECTS.

Ever since their development the irrigation projects in the lower Colorado River Basin have been seriously menaced by floods in the Colorado and Gila Rivers, and amelioration of this condition is the most pressing need for con-

struction on the river at this time. The river in this section carries great quantities of silt and has built up its bed above the adjoining country. It is prevented from entering the irrigated areas by levees, built and maintained, at large expense, by the irrigation projects. The floods from the Gila are due to winter rains, while those in the Colorado are due to melting snows in the summer, when the Gila is practically dry. The Gila floods have reached a flow as high as 240,000 cubic feet per second, which is probably above the maximum reached by the Colorado. The Gila floods are of short duration, however, while the Colorado floods last about three months. The Gila floods are as apt to overtop the levees as the Colorado floods, but the cost of maintaining a flood channel for them is very much less and the damage in case of a break is also very much less. So long as the Gila remains uncontrolled the levees will have to be maintained to their present dimensions. The Colorado River floods, aside from the threat of tremendous damage in case of breaking into the irrigated areas, cause very heavy yearly expenditures for the maintenance of the levee system. During the period of high water, with varying flow, the Colorado shifts its channel between the levees, and each shift is apt to produce attacks upon the levees at several new points. If the channel could be stabilized between the levees the maintenance cost would be much reduced. The stability of the channel is much more affected by the great range of seasonal variations in the flow than it is by the size of the maximum flow. If the flow were uniform the channel would adjust itself to a velocity that would not move much material, and the cost of maintenance would be small. The instability of the present channel is undoubtedly considerably aggravated by the diversions for irrigation during the low-water period and by the practice of taking from the water diverted all the sediment possible and returning it to the river channel to be handled by the reduced flow. The ideal condition, so far as flood protection is concerned, would be to regulate the flow so that it could always be uniform below the irrigation diversions. On account of cost and interference with other uses of the water such an ideal will never be realized, but the nearer it is approached the less will be the cost of protecting the lower basin. The problem is so complicated that it will not be possible to determine the exact limit of flood flow that will guarantee relief from flood danger. The Reclamation Service has concluded that if the flood flow be limited to a maximum of 50,000 cubic feet per second sufficient relief will be afforded. The lower the maximum flow the nearer the annual flow will be equated and the greater will be the flood benefit; but no outstanding reason is given for adopting 50,000 cubic feet per second as a maximum, and in view of the fact that the channel will have to carry from time to time as much as 250,000 cubic feet per second so long as the Gila remains uncontrolled, it is believed that an initial reduction of the maximum flood flow of the Colorado to 75,000 cubic feet per second and a building up of the minimum flow to 10,000 cubic feet per second can be considered as giving material relief for a first step, if additional relief can be looked forward to in the not too distant future as other projects on the river provide more storage.

The records of flow in the Colorado are not entirely satisfactory. The most complete are those of the Yuma gauging station. Doubt has been cast upon these records due to the wide variations that occur in the area of cross section of the river channel at the gauging stations. The Yuma records extend over a period of more than 20 years. Discharge measurements, accompanied by careful soundings to determine the cross section of the channel, are taken at all stages at least three times a week. It is believed that, in spite of the unfavor-

able conditions, the Yuma records are reasonably accurate and safe to use for flood studies, especially as the probable net error seems to be on the side of safety. In any case they are the best available.

The flow at Black Canyon during floods exceeds that at Yuma due to losses between the two, from irrigation diversions, from evaporation, and from the reservoir capacity of the river channel between the two points. The Reclamation Service estimates that the flood flow at Black Canyon may exceed that at Yuma by 1,500 cubic feet per second, and this figure seems reasonable when applied to the flood season. Exhibit No. 3 has been compiled, from the Yuma records by adding to them 1,500 cubic feet per second, to show the amount of storage required at Black Canyon to reduce the maximum flow to 50,000 cubic feet per second and 75,000 cubic feet per second, respectively. The table includes all years of high flow over the 22 years' period, 1899 to 1920, inclusive.

This exhibit shows that 4,000,000 acre-feet storage would have kept the flow below 50,000 cubic feet per second in all but five years out of the 22 and that in those five years it would have kept the flow below 75,000 cubic feet per second with considerable margin of safety. It further shows that 6,000,000 acre-feet storage would have kept the flow below 50,000 cubic feet per second in all years.

It is probable that there will be an occasional flood that will exceed any in the period of record. A study has been made to determine what the probabilities of such a flood are. The figures are based upon the assumption of coincidence of the maximum recorded from all tributaries. The results indicate that a flood exceeding the maximums recorded by 25 per cent may occur once in 100 years. With 4,000,000 acre-foot storage available, such a flood probably would not have raised the maximum flow above 75,000 cubic feet per second.

The floods on the Colorado River can be predicted and controlled to a degree that is not possible on any other large river in the country.

The total run-off of the floods can be roughly estimated from Weather Bureau records of the snow precipitation on the drainage area during the previous winter. The water practically all comes from the higher parts of the drainage area and flows many miles through a perfectly arid region before reaching the lower basin. Information on the progress of the run-off can be had several days in advance from gauging stations above. In view of the above, it is believed that if 4,000,000 acre-feet storage is provided for flood control, 3,000,000 acre-feet of it can safely be held full at the end of the flood season to build up the low-water flow; and if 6,000,000 acre-feet storage were provided, 5,000,000 acre-feet could be similarly used.

#### IRRIGATION REQUIREMENT.

On page 40 of the "Problems of the Imperial Valley and Vicinity" will be found tables giving the amount of storage required to supply the demand of the "most feasible acreage" in the lower basin when the "most feasible acreage" in the upper basin is irrigated. These tables are reproduced here-with for convenience, as Exhibit No. 4. On this basis the maximum storage required for irrigation for the 22 years, 1899 to 1920, inclusive, would have been 2,340,000 acre-feet and in all but six years out of 22 the storage required would have been less than 1,000,000 acre-feet.

If 4,000,000 acre-feet or more be provided for flood protection, sufficient of it can safely be used to meet all irrigation demands for the next 15 years.

## STORAGE RESERVOIRS.

On page 42 of "Problems of the Imperial Valley" is a list of reservoirs in the upper section of the river. Some of these reservoirs will certainly be developed in the future and will do their share toward equating the flow of the river. They should be considered in any scheme of ultimate development of the river, but are at present so far from the power market that they can not well be considered for an initial development which is to be paid for by the lease or sale of power.

As stated above, there are two possible reservoir sites below the junction of the Green with the Colorado; one at Glenn Canyon and one at Black (or Boulder) Canyon. Topographic surveys of both areas have been made and Exhibit No. 5 shows capacity and area of curves of both. The Black Canyon site has several advantages over the Glenn Canyon site for an initial development. It has slightly greater capacity for a reasonable height of dam, it is more accessible, it is more centrally located with respect to a probable power market, and being nearer to the lower basin will give somewhat better control for flood protection and irrigation. It has the disadvantage, however, of being at the bottom of the power section of the river, and for that reason should be developed to no greater extent than necessary to furnish a reasonable amount of flood protection and an amount of power that can be marketed without excessive carrying charges.

A dam at the upper end of Black Canyon, with crest 310 feet above present low-water level and a drawdown of 110 feet, will give 4,000,000 acre-feet of storage for flood protection, 3,000,000 acre-feet of storage for improving the low-water flow, and will develop about 225,000 kilowatts of primary power at 75 per cent load factor.

The investigation of foundations at this site is not complete, but borings taken by the Reclamation Service indicate that suitable foundations will probably be found at less than 50 feet below the present low-water surface. No investigation of foundations has yet been made at Glenn Canyon, but the conditions strongly indicate that suitable foundations will be found at a reasonable depth. The river at Lees Ferry, just below Glenn Canyon, undergoes an abrupt change of slope. This change of slope is evidently caused by a stratum of hard limestone which has offered much more resistance to erosion than the red sandstone which both underlies and overlies it. There is apparently a suitable dam site about 2 miles above Lees Ferry, and it seems unlikely that the river channel at this point has eroded much deeper than at Lees Ferry.

## EVAPORATION AND SILTING.

If 4,000,000 acre-feet of storage is provided, the supply of water will be sufficient so that losses from evaporation will not have to be considered for 15 or 20 years, and by that time additional storage will probably be available.

Silting of reservoirs on the Colorado will undoubtedly have to be given serious consideration. The Reclamation Service estimates the silt discharge of the river at Boulder Canyon as 88,000 acre-feet per annum. The silt will deposit at the upper end of the reservoir and will begin to encroach on the available storage capacity as soon as the reservoir is put into operation. There will be only one solution for the silt problem for many, many years to come and that is to increase the storage capacity to compensate for the silting. Experience with the first reservoir built will give positive data as to rate of encroachment and will serve as a basis for determining when additional storage should be undertaken.



## POWER MARKET FOR COLORADO RIVER PROJECTS.

A market for power from the lower Colorado River must be sought in Arizona, Nevada, and California. A study has therefore been made of the power conditions in these States.

Exhibit No. 6 gives the figures compiled by the Census Bureau, showing power used in electric industries and power used in manufactories in each of these States.

Exhibit No. 7 is a summary of the data collected by the United States Geological Survey, giving the amount of electric power consumed in the three States. Consideration of these tables indicates that California is by far the largest user of electric power and that Nevada uses so little power, and that little is distributed over such great distances, that no general market for Colorado River power can be looked for from Nevada. Perhaps a mining and pumping load of as much as 5,000 kilowatts may be found in Nevada, but this is so small a part of the load for a development of the size necessary on the lower Colorado and is so uncertain that it can not be given much weight.

Exhibit No. 8, compiled from the records of the California State Railroad Commission, gives the total output of all California public utilities, including Los Angeles and other municipal plants for the years 1911 to 1921, inclusive. It shows the annual increase in the use of power and the percentage of the power that was generated by steam. These figures cover a long period and are considered more reliable than others available and will be used as a basis for this study.

Exhibit No. 9 shows the increase in population for the State of California from the years 1850 to 1920. It also shows the installed capacity of all hydro plants in California on September 1, 1921, as compiled by Mr. F. H. Fowler, district engineer of the Forest Service.

Exhibit No. 10 shows the new power developments that are under construction or proposed for the State of California. In this table only projects which are feasible of development are included and the dates when they may go into operation have been retarded, in many cases as much as 15 years beyond the dates proposed by the parties interested in the development, in order to make them conform more closely to the probable demand. It is believed that these developments will eventually be carried out, either by the present proponents or by other parties. There may be a few feasible developments in California which have not been included in this list, but the list is fairly complete. California has suffered the past five years from a shortage or a threatened shortage of power, with the result that at present power development is greatly stimulated; and it is not unlikely that the market will be over-developed before this stimulation dies out. There is much wild talk about the capacity of California to absorb power which should be properly discounted by those considering investment in new development.

Exhibit No. 11 shows what is believed to be a fair estimate of the probable growth of load in California up to 1945. This estimate is based on a consideration of the past total growth of use of electric power, the growth of use of power for manufacturing, and the growth of population. The last column of this table shows the capacity that will be installed, if the program shown on Exhibit 10 is carried out.

Exhibit No. 11 assumes that 90 per cent of the average load will be carried by hydro, whereas in the past not much over 80 per cent has ever been carried. It also assumes that the installed hydro capacity will operate at a capacity-load factor of 50 per cent. In the year 1921 the hydro plants in California operated at a capacity-load factor over 51 per cent, and it is probable that this

load factor will be considerably improved, as many of the new projects include storage capacity which will convert much of the present secondary power into primary power. Both of the above assumptions tend to make the probable growth of load as given in the table higher than it will actually be. A comparison of the last two columns of Exhibit No. 6 shows that the installed capacity will just about meet the probable load up to include 1927, but that thereafter it will materially exceed the probable market demand up to include 1945.

Exhibit No. 12 is similar to No. 11, except that it represents what may be stated as the greatest possible growth of load in California for the period 1921 to 1945. An inspection of the last two columns of this exhibit indicates that the market demand may catch up to the installed capacity about 1940.

There will be differences of opinion as to the future rate of growth of power consumption in California; but it is safe to conclude that there are developments feasible in California which will supply the California market, whatever its growth, until 1940, and probably longer, and that no market for Colorado River power can be found in California before that date, unless arrangements can be made with the distributing companies to take it instead of developing some of their own projects.

Exhibit No. 13 gives a list of all the projects in California which might be replaced by Colorado power. On account of the great transmission distance, power from the Colorado River will cost as much or more to deliver in California as power from the California projects. Consequently Colorado River power can not expect to enter California through competition and will be dependent upon ability to make agreements with the California companies to postpone their California developments.

Exhibit No. 14 gives a statement of the probable growth of power market in the State of Arizona from 1926 to 1945, inclusive. The last column gives the probable load that will be available for Colorado River projects.

Exhibit No. 15 is a combination of Exhibits Nos. 13 and 14 and shows the possible load that may be obtained for Colorado River projects in Arizona and California for the years 1926 to 1945, inclusive. As stated before, the possibilities of obtaining a market in California prior to 1940 will be dependent upon agreements with the California distributing companies.

The only other markets that have been suggested to use Colorado River power are electrification of railroads, new electrochemical or electrometallurgical industries, and pumping for irrigation. Electrification of the railroads entails a capital investment of at least \$25,000 per mile of road. None of the railroads in the vicinity of Colorado River is likely to be in a position to undertake such an investment for several years to come. Moreover, if all the railroads within reach of power from the lower Colorado were electrified they would not use more than 40,000 horsepower. The cost of Colorado River power will not be sufficiently low to overcome the high cost of transportation to such an inaccessible region, and there is little prospect of electrochemical industries locating there. The only electrometallurgical industries in sight at present are the copper mines, power for which is included in the prospective load for Arizona. Power for irrigation pumping, except as it may be obtained from plants built in conjunction with the irrigation developments themselves, is included in the probably available load, per Exhibit No. 15. It is concluded that none of these uses of power offers sufficient promise to justify investment at the present time.

Exhibit No. 16 is an estimate of the gross income that may be expected from the sale of Colorado River power for the years 1926 to 1940, inclusive.

There are three sites on the river which must be considered in arriving at the best scheme of development: Black Canyon, Diamond Creek, and Glenn

Canyon. There may be others; but nobody is seriously considering spending money on them at present, and, so far as information is available, the three above mentioned are the most favorable for initial development.

Exhibit No. 17 is a study of four different schemes:

*Scheme 1.*—A dam 310 feet high at Black Canyon which will give 4,000,000 acre-feet storage for flood control, limit the maximum flow to less than 75,000 cubic feet per second, build up the 90 per cent of the time flow to 10,000 cubic feet per second, and furnish 225,000 kilowatt primary power.

*Scheme 2.*—The same dam at Black Canyon with Girard's Diamond Creek project as planned by him with a 250-foot dam. This combination will give practically the same flood protection and low-water flow, but will increase the power available to 412,500 kilowatts primary power.

*Scheme 3.* The same as scheme 2 with addition of a 400-foot dam at Glenn Canyon, which will add 8,000,000 acre-feet storage. This will reduce maximum flow to between 40,000 and 50,000 cubic feet per second and raise the 90 per cent of the time flow to 15,500 cubic feet per second and make possible the development of 787,000 kilowatts primary power.

*Scheme 4.* Black Canyon Dam, as per first plan, but designed to be raised later to 550 feet height. This will ultimately give 26,500,000 acre-feet of storage and practically equate the flow below, and will make possible the development of 675,000 kilowatts primary power after taking care of maximum irrigation demands.

In preparing Exhibit No. 17 the gross income that might be earned was taken from Exhibit No. 16. Costs of construction were estimated by Messrs. Bebb and Oakes. For water wheels, electrical machinery, transmission equipment, etc., etc., unit costs were obtained from manufacturers and operating companies. For dams and hydraulic-control equipment the unit costs adopted by the Reclamation Service were used to facilitate comparison. For the Glenn Canyon Dam 50 per cent was added to cost of a similar dam at Black Canyon to cover extra cost due to inaccessibility.

Exhibit No. 18 shows the schedule of installation of equipment for each scheme used to determine the amount and cost of construction each year. Interest during construction was assumed as 6 per cent per annum and is included in cost of construction and cost per kilowatt installed as given in Exhibit No. 17.

The depreciation reserve was computed on the following assumption of the life of equipment:

	Years.
Dams .....	100
Penstocks .....	50
Buildings .....	50
Transformers .....	50
Transmission lines .....	50
Rotating apparatus .....	33½

Taxes were assumed at the rate of 15 mills per \$1 of the investment (not including interest during construction) at the beginning of each year.

In the computation of the table of earnings and surplus it was assumed that the projects were to be financed by an issue of 70 per cent of the investment in 6 per cent bonds and the remainder in stock. The amounts in the table are the accumulated net earnings and surplus, including the year under which the amount is entered. Net earnings have been taken as the amount remaining after 6 per cent interest on the bonds, as represented by 70 per cent

of the investment on January 1 of any given year, and operating expenses have been paid and the depreciation reserve for the year set up.

Interest at 6 per cent on the depreciation reserve has been included in earnings and surplus each year as well as the interest at 6 per cent on the sum remaining in surplus, if any, after 6 per cent dividends on the stock and \$1,000,000 working capital had been deducted.

Exhibit No. 19 shows the estimated cost of the dams, power houses, and transmission lines without interest during construction.

#### CONCLUSIONS.

A study and analysis of the data hereinbefore set forth lead to the following conclusions:

1. The best way to obtain early benefits in flood protection is to construct a dam at Black Canyon to give at least 4,000,000 acre-feet storage and not more than 6,000,000 acre-feet storage. Such a dam will produce about 20 per cent more power than Girand's Diamond Creek project at a price, per kilowatt, slightly less, provided foundations are found as expected. It will also fit into the best scheme of development, and there are several advantages to be gained by constructing it before any other project on the river.

2. The Diamond Creek development of Girand will give no flood protection, but will fit into the best scheme of development and will not seriously interfere with any other development on the river, either physically or financially.

3. Schemes 3 and 4 carry the development as far as it is useful to go at present, as they will both meet all needs for lower river development for the next 20 to 30 years.

4. A careful comparison of schemes 3 and 4 shows that scheme 3 is somewhat more favorable in both cost and amount of power developed. It has a great advantage in flexibility; it can be speeded up or retarded to meet the demands of the market, and the carrying charges will probably be much less than for scheme 4. The advantages of scheme 3 over 4 will be very great when more than 875,000 kilowatts of power is needed from the Colorado, due to having the regulation of flow at the head of the power section of the river. Scheme 3 gives about the same flood protection as 4 and will furnish sufficient water to meet all irrigation demands for the next 20 years. It does not provide hold-over storage, but hold-over storage will not be needed for many years and when needed can be obtained by raising the Glenn Canyon Dam. Scheme 4 presents disadvantages from the power point of view, due to the operating difficulties and loss of efficiency caused by the wide variation in head, and to the fact that to keep down the cost it is proposed to locate the dam in the narrowest part of the canyon where a suitable place for the power house is almost impossible to find.

5. It is believed that scheme 3 can safely be used as a guide for the development of the lower river. Briefly stated, it consists of the following structures:

1. A power and storage dam 310 to 360 feet high at Black Canyon.

2. A power dam about 250 feet high at Diamond Creek.

3. A storage dam about 400 feet high at Glenn Canyon. This dam can later be raised as additional storage is needed, and when the final height has been reached power can be installed.

If bedrock for foundations at Black Canyon, instead of being 40 to 50 feet below water as expected, is found to be over 100 feet below water, as it is at Boulder Canyon, it may prove economical to change the order or procedure and build Diamond Creek and Glenn Canyon first, so as to have the benefit of the regulated flow from Glenn Canyon during the construction of the deep and difficult foundations at Black Canyon.

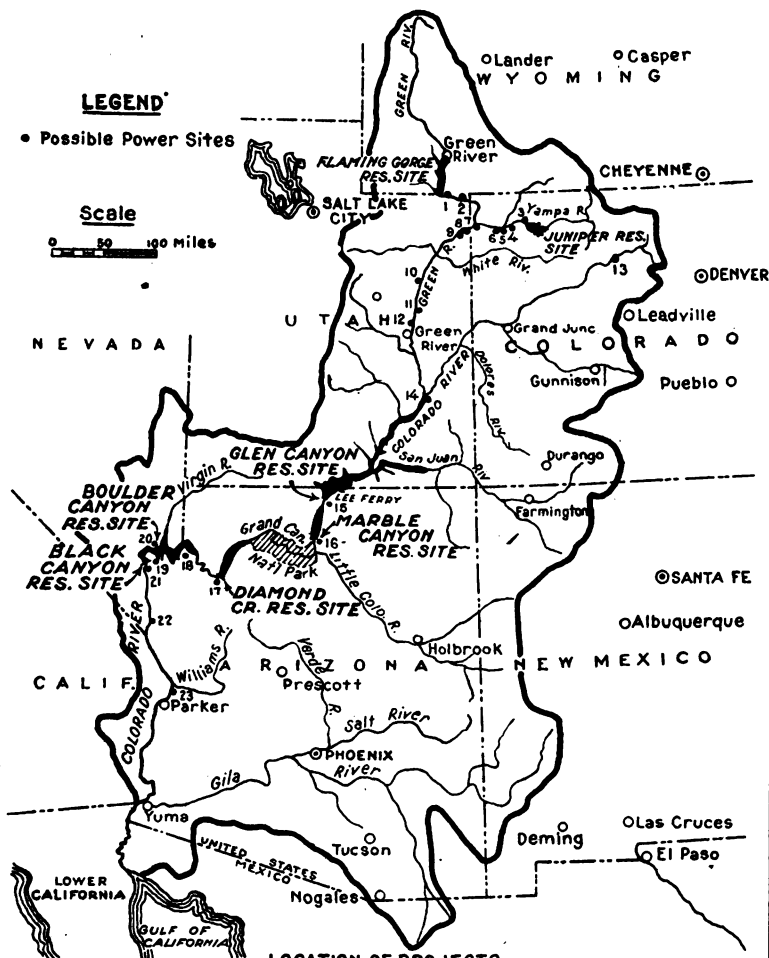
# COLORADO RIVER BASIN FEDERAL POWER COMMISSION

## LEGEND

- Possible Power Sites

## Scale

0 20 100 miles

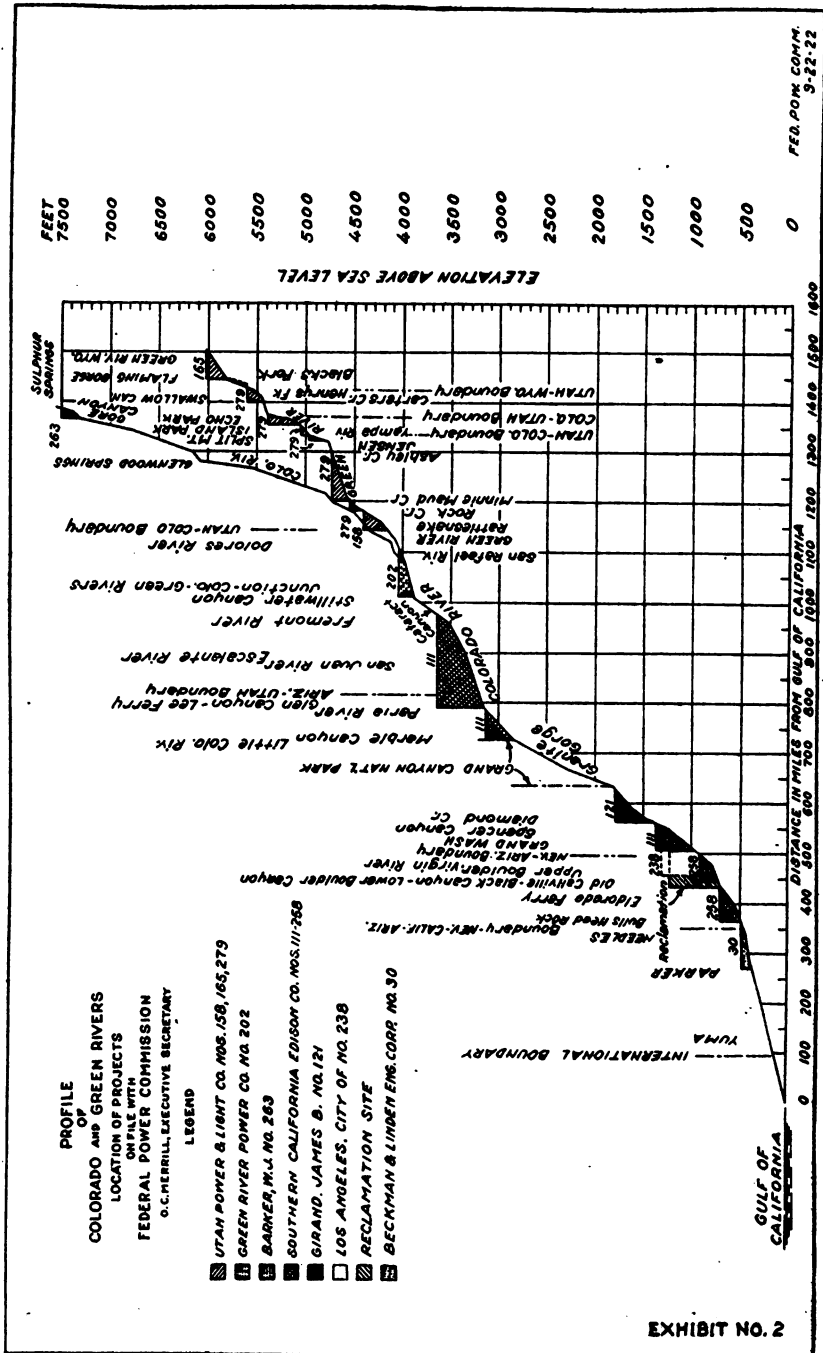


## LOCATION OF PROJECTS

1	FLAMING GORGE DAMSITE - UTAH POWER & LIGHT CO.	NO. 165
2	SWALLOW CANYON	"
3	JUNIPER MT.	" 279
4	MABEL	"
5	LILY PARK	"
6	BLUE CANYON	"
7	ECHO PARK	"
8	ISLAND PARK	"
9	SPLIT MT.	"
10	MINNIE MAUD	"
11	ROCK CREEK	"
12	RATTLE SNAKE	"
13	KREMLING RES. SITE - BARKER, W. J.	" 158
14	STILLWATER CANYON DAMSITE -	" 263
15	GLEN CANYON	" 202
16	MARBLE CANYON	" 111
17	DIAMOND CREEK	" 121
18	GRAND WASH	" 111
19	UPPER BOULDER CANYON DAMSITE -	" 238
20	OLD CALLVILLE DAMSITE -	" 258
21	BLACK CANYON	" 258
22	BULLS HEAD ROCK	" 258
23	PARKER DAMSITE -	" 30

Federal Power Comm. 9-18-22

EXHIBIT NO. 1



6. Regardless of the merits of the Swing bill, it must be recognized that it raises questions that kept the Federal Water Power Act under discussion in Congress for 12 years, and it has already stirred up sufficient opposition to make its early passage improbable. The Federal Water Power Act, with the applications made under it offers a means of immediate action, without the expenditure of any money by the United States. Under it the United States can retain full control of the storage for flood protection, irrigation, and any other necessary activity. The international character of the river is mentioned as a reason for the United States building and operating all projects on the river. There may be international difficulties over diversions in the lower basin, but there is less chance for difficulties over the power developments than there is on the Niagara and St. Lawrence Rivers.

7. There seems to be no sufficient reason to justify further delay in granting Girard's license for Diamond Creek, unless the Commission considers the need for immediate flood relief so great that it will be justified in requiring Girard to change his project to Black Canyon instead of Diamond Creek.

8. Operating power projects on the Colorado with the great transmission distances will be unusually difficult and hazardous. It is not a business the Federal Government will find attractive to enter. If the Government is going to invest in the Colorado River for flood protection or irrigation, it would seem advisable for it to undertake the construction of the Glenn Canyon storage dam and obtain reimbursement under the headwater improvement clause of the Federal Water Power Act.

9. The conclusions in this report are believed to be sound, impartial, and conservative; but they are at variance in some respects with those of the Reclamation Service; and if the Commission is not ready to adopt them, it is recommended a board similar to that on the Columbia be appointed to develop the best scheme of development.

Col. W. KELLY, *Chief Engineer.*

The meeting adjourned at 4.30 p. m.

O. C. MERRILL, *Executive Secretary.*

#### EXHIBIT 3.—Flood control of Colorado River (exclusive of Gila).

(All years of large run-off 1899 to 1920, inclusive; flow at Black Canyon taken as 1,500 cubic feet per second greater than Yuma.)

Year.	Period flow exceeded 50,000 cubic feet per second.	Number of days.	Period flow exceeded 75,000 cubic feet per second.	Number of days.	Total discharge per period in which flow exceeded—		Storage required to reduce flow to—	
					50,000 cubic feet per second.	75,000 cubic feet per second.	50,000 cubic feet per second.	75,000 cubic feet per second.
1907...	May 27-Aug. 10.	76	June 2-July 24..	53	13,433,000	10,504,000	5,826,000	2,554,000
1909...	May 15-July 21..	67	June 2-July 16..	45	12,564,000	9,593,000	5,864,000	2,743,000
1912...	May 24-July 14..	52	May 31-June 28..	27	8,981,000	6,108,000	3,781,000	2,058,000
1914...	May 18-July 13..	57	May 24-July 4..	42	10,237,000	8,430,000	4,637,000	2,130,000
1917...	May 28-July 24..	61	May 30-July 19..	51	11,775,000	10,524,000	5,675,000	2,874,000
1920...	May 17-July 12..	57	May 29-June 30..	31	11,413,000	8,018,000	5,713,000	3,368,000

4,000,000 acre-feet storage would have kept flow down to 65,000 cubic feet per second in worst year, 1920.

#### EXHIBIT 4.—Minimum storage development.

	Acres.
Upper basin—additional acreage.....	1,008,000
Lower basin:	
Present acreage.....	698,000
Additional acreage.....	710,000
	<hr/>
1,408,000	
Total.....	2,416,000

10228°—22—13

*Estimated demand for most feasible acreage.*

[Acre-feet. Based on 5 feet duty for lower basin because of no necessity for economy.]

	Lower basin, 1,408,000 acres.	Upper basin, 1,008,000 acres, total. <sup>1</sup>	Total.		Lower basin, 1,408,000 acres.	Upper basin, 1,008,000 acres, total. <sup>1</sup>	Total.
January.....	260,000	.....	260,000	August.....	800,000	180,000	980,000
February.....	200,000	.....	200,000	September.....	720,000	180,000	900,000
March.....	610,000	.....	610,000	October.....	450,000	80,000	530,000
April.....	670,000	80,000	750,000	November.....	380,000	.....	380,000
May.....	680,000	380,000	1,060,000	December.....	110,000	.....	110,000
June.....	870,000	400,000	1,270,000	Total.....	6,630,000	1,580,000	8,210,000
July.....	870,000	320,000	1,190,000				

<sup>1</sup> Assumed that withdrawals for storage balance return flow out of irrigation season.*Storage required for most feasible acreage neglecting evaporation from reservoir.*

	Acre-feet.		Acre-feet.
1899.....	460,000	1910.....	410,000
1900.....	1,660,000	1911.....	380,000
1901.....	1,410,000	1912.....	330,000
1902.....	2,340,000	1913.....	810,000
1903.....	1,010,000	1914.....	320,000
1904.....	440,000	1915.....	1,000,000
1905.....	980,000	1916.....	200,000
1906.....	250,000	1917.....	370,000
1907.....	.....	1918.....	770,000
1908.....	290,000	1919.....	1,030,000
1909.....	.....	1920.....	480,000

## EXHIBIT 6.—Census statement of power used.

## ARIZONA.

In electric industries.						In manufactures.	
Year.	Number of station.	Primary power.		Output.		Year.	Primary (horse-power).
		Steam and oil (horse-power).	Hydro (horse-power).	Thousands (kilowatt hours).	Average (kilowatt years).		
1907.....	15	6,976	750	9,392	1,070	1900.....	8,537
1912.....	16	12,775	9,800	32,960	3,760	1904.....	21,412
1917.....	29	27,462	11,200	65,732	7,500	1909.....	39,140
						1914.....	54,607

## NEVADA.

1907.....	9	720	6,200	26,022	3,360	1900.....	1,561
1912.....	8	2,880	12,540	44,970	5,130	1904.....	2,834
1917.....	14	1,717	15,115	63,846	6,146	1909.....	7,765
						1914.....	18,748

## CALIFORNIA.

1907.....	129	176,229	208,444	661,608	75,500	1900.....	128,953
1912.....	112	416,186	452,062	1,747,459	199,800	1904.....	216,309
1917.....	98	484,992	738,977	2,746,567	313,680	1909.....	325,100
						1914.....	491,025



# RESERVOIR SITES CAPACITY AND AREA CURVES---BLACK AND GLEN CANYONS COLORADO RIVER

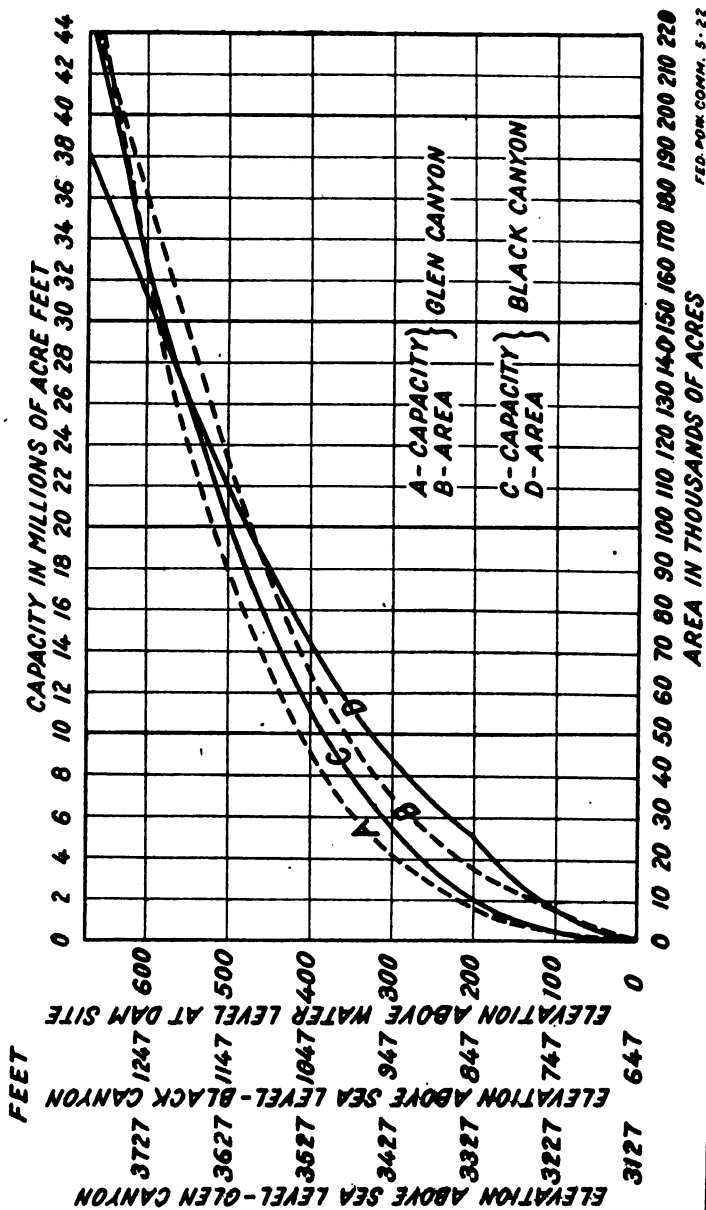


EXHIBIT NO.5



**EXHIBIT 7.—Electric power consumed per report of United States Geological Survey.**  
**ARIZONA.**

Year.	Thousands of kilowatt hours by hydro.	Thousands of kilowatt hours by steam.	Total thousands of kilowatt hours.	Average kilowatt years.
1919.....	85,842	136,530	222,372	25,400
1920.....	106,627	52,701	159,228	18,200
1921.....	96,115	41,436	134,551	16,400

Installed capacity of hydro in Arizona in 1921 was about 38,760 kilowatts.

**NEVADA.**

Year.	Thousands of kilowatt hours by hydro.	Thousands of kilowatt hours by steam.	Total thousands of kilowatt hours.	Average kilowatt years.
1919.....	32,492	5,222	37,714	4,300
1920.....	32,690	859	33,549	3,800
1921.....	36,089	361	36,450	4,100

**CALIFORNIA.**

Year.	Thousands of kilowatt hours by hydro.	Thousands of kilowatt hours by steam.	Total thousands of kilowatt hours.	Average kilowatt years.
1919.....	2,302,766	942,054	3,244,814	370,400
1920.....	2,568,541	1,152,152	3,720,693	424,700
1921.....	3,223,432	755,697	3,979,129	454,200

**EXHIBIT 8.—Kilowatt hours output, hydro and steam, 1911 to 1921, inclusive.**

**STATE OF CALIFORNIA.**

[Railroad commission records of all public utilities, including Los Angeles and other municipal plants.]

Year.	Millions of kilowatt hours.	Average, kilowatt year.	Annual increase, kilowatt year.	Per cent steam.	Year.	Millions of kilowatt hours.	Average, kilowatt year.	Annual increase, kilowatt year.	Per cent steam.
1911.....	1,402.0	160,250	.....	23.8	1917.....	2,638.0	301,100	33,700	18.8
1912.....	1,598.0	182,400	22,150	28.5	1918.....	2,965.0	338,500	37,400	24.0
1913.....	1,979.1	225,000	42,600	36.2	1919.....	3,234.9	369,200	30,700	30.7
1914.....	2,102.3	239,800	14,800	18.9	1920.....	3,617.6	412,800	43,600	31.0
1915.....	2,211.3	262,400	12,600	17.8	1921.....	3,908.9	446,100	33,300	18.0
1916.....	2,349.3	267,400	15,000	15.2					

The average yearly increase for the 11 years has been 26,000 kilowatts per year.

The average yearly increase for the last 5 years has been 35,700 kilowatts per year.

Over the 11 years demand has been compounding at rate of 10.9 per cent.

**EXHIBIT 9.—Installed capacity hydro plants in California September 1, 1921.**

**STATE OF CALIFORNIA.**

(Population census.)

Year.	Population.	Year.	Population.
1850.....	92,597	1890.....	1,213,398
1860.....	379,994	1900.....	1,485,053
1870.....	560,247	1910.....	2,377,549
1880.....	864,694	1920.....	3,426,861

(Per District Engineer Fowler's report.)

Market.	Hydroelectric.		Steam.		Total.	
	Horse-power.	Kilowatts.	Horse-power.	Kilowatts.	Horse-power.	Kilowatts.
Northern California.....	513,185	384,888	218,164	163,623	731,349	548,511
Southern California.....	533,602	400,200	218,296	163,722	751,898	563,922
Total.....	1,046,787	785,088	436,460	327,345	1,483,247	1,112,433

In 1921 704,100,000 kilowatt hours was generated by steam, equaling 80,300 kilowatt years; 3,204,800,000 kilowatt hours was generated by hydro, equaling 365,800 kilowatt years. Hydro in 1921 operated at 51.1 per cent load factor.

## EXHIBIT 10.—California hydro-power projects.

[Installed capacities and probable year of installation of additional capacity.]

Companies.	Streams.	Sep-tem-ber, 1921, instal- led ca- pac- ties kilo- volt am- peres.	Program of development in kilovolt amperes.												Ultimate capacity, new projects.	
			1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1940	1945		
California-Oregon Power Co.	Klamath River, project 215.	23,760	25,000							64,000			64,000			183,000
Pacific Gas & Electric Co.	Pit River, project 233	230,200	9,000													9,000
Mount Shasta Power Corp.	Pitt River, project 9		63,000	15,700					61,000	72,000	171,000					382,700
Pitt River Power Co.	Feather River, project 146.	109,000							39,000				52,500			105,000
Great Western Power Co.	Feather River, project 249.								21,000		43,000			65,000	40,000	160,000
Jorgensen, Lars	Feather River, project 291.												22,500	22,500		45,000
Great Western Power Co.	Forest Service permits															
Snow Mountain Water & Power Co.	South Eel River, project 77.	8,500		20,000						40,000			40,000			100,000
San Joaquin Light & Power Corp.	Kings River, project 102.	82,450														11,000
Do.	Kings River, project 175.							31,000							91,500	91,500
Do.	Kings River, project 226.												31,000	23,000	16,500	126,000
Do.	Merced River, project 260.								30,000		52,500				150,000	150,000
Do.	Big Creek, project 67.	201,350							50,000	90,000			195,000			52,408
Southern California Edison Co.	San Joaquin River, project 105.															385,000
Do.	San Joaquin River, project 120.			49,000									212,000			212,000
Do.	Salmon and Horse Creeks, project 85.			2,200					49,000							147,000
Do.	Trinity River, project 99.	7,025														2,200
Western States Gas & Electric Co.	American River, project 184.			15,000												1,440
El Dorado Power Co.									15,000	35,000						80,000



EXHIBIT 10.—California hydro-power projects—Continued.

Companies.	Streams.	Sep-tem-ber, 1921, instal-ment ca-pac-ities kilo-volt am-peres.	Program of development in kilovolt amperes.												Ultimate capacity, new projects.		
			1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1935	1940		1945	
Miscellaneous—Contd.																	
Samson, W. H.	Trinity River, project 247												7,500			11,250	18,750
Hughes, J. H.	Feather River, project 261									3,000							3,000
Thebo, Starr & Anderson.	McCloud River, project 300															48,000	172,500
Do.	American River, project 307													22,500			22,500
City of San Francisco.	Moccasin Creek																225,000
Turlock-Modesto Ir- rigation District.	Don Pedro Dam													112,500			52,500
Total.			127,000	146,200	81,140	150,000	117,850	283,700	345,450	471,500	690,630	645,030	666,470	670,000	4,281,970		
Accumulative total.			273,200	354,340	504,340	622,190	910,980	1,259,340	1,730,840	2,400,470	3,045,600	3,611,970	4,281,970				

NOTE.—This table includes only projects that are feasible and likely to be installed. In many cases the possible date of installation has been set forward (in some cases as much as 15 years) to a more distant future than projected by the applicants.

**EXHIBIT 11.—Probable growth of load, 1921 to 1945, inclusive.****STATE OF CALIFORNIA.**

[10.9 per cent till 1923, 9 per cent till 1930, 7.5 per cent till 1935, 6 per cent till 1940, and 4 per cent till 1945.]

Year.	Probable average load (kilowatt year).	Assume 90 per cent of average load carried by hydro (kilowatt year).	Assume 50 per cent load factor installed hydro capacity required will be (kilowatts).	Installed capacity, existing and proposed (kilowatts).
1921.....	446,100	401,490	802,900	785,088
1922.....	494,700	445,308	890,400	912,000
1923.....	548,800	493,760	987,400	1,058,200
1924.....	608,400	547,008	1,097,200	1,139,300
1925.....	674,700	607,300	1,214,400	1,289,000
1926.....	735,400	661,900	1,325,000	1,397,000
1927.....	801,800	721,400	1,443,000	1,695,000
1928.....	873,700	786,300	1,573,000	2,044,000
1929.....	952,300	857,100	1,714,000	2,516,000
1930.....	1,038,000	934,200	1,868,000	3,185,000
1935.....	1,499,000	1,349,100	2,698,000	3,530,000
1940.....	1,995,000	1,795,500	3,591,000	4,395,000
1945.....	2,427,000	2,184,360	4,369,000	5,067,000

Electric power consumption has increased at rate of 10.9 per cent from 1911 to 1921, inclusive. Power used in manufacturing per Census report increased at rate of 11 per cent from 1909 to 1909 and at rate of 8.3 per cent for five years 1909 to 1914.

Population of California per Census report increased at rate of 4.3 per cent from 1900 to 1910 and at rate of 4 per cent from 1910 to 1920.

**EXHIBIT 12.—Possible growth of load, 1921 to 1945, inclusive.****STATE OF CALIFORNIA.**

[Assume rate of 10.9 per cent till 1930, 8 per cent till 1940, and 4 per cent thereafter.]

Year.	Average load (kilowatt year).	Assume 90 per cent of average load carried by hydro (kilowatts).	Installed hydro capacity required at 50 per cent load factor.	Installed capacity existing and proposed (kilowatts).
1921.....	446,100	401,490	802,900	785,088
1922.....	494,700	445,308	890,400	912,000
1923.....	548,800	493,760	987,400	1,058,200
1924.....	608,400	547,008	1,097,200	1,139,300
1925.....	674,700	607,300	1,214,400	1,289,000
1926.....	748,200	673,400	1,347,000	1,397,000
1927.....	826,300	746,300	1,493,000	1,695,000
1928.....	919,200	827,300	1,654,000	2,044,000
1929.....	1,019,400	917,500	1,835,000	2,516,000
1930.....	1,136,500	1,017,500	2,035,000	3,185,000
1935.....	1,661,000	1,494,000	2,989,000	3,530,000
1940.....	2,440,000	2,196,000	4,392,000	4,395,000
1945.....	2,969,000	2,672,100	5,344,000	5,067,000

**EXHIBIT 13.—List of all California projects which may be replaced by Colorado power.**

Companies.	Streams.	Project No.	Year.			
			1930	1935	1940	1945
San Joaquin Light & Power Corporation.....	Kings River.....	226	.....	.....	.....	150,000
Southern California Edison Co.....	Big Creek.....	67	195,000	.....	.....	.....
Do.....	San Joaquin.....	105	.....	212,000	.....	.....
City of Los Angeles.....	Big Pine Creek.....	193	1,570	4,000	2,300	.....
Do.....	Lock Creek.....	194	.....	.....	7,100	.....
Do.....	Diversion Creek.....	195	.....	1,580	1,120	.....
Do.....	Cottonwood Creek.....	98	.....	2,180	3,000	2,700
Do.....	Kings River.....	128	.....	.....	.....	350,000
Do.....	Kern River.....	152	7,200	.....	.....	19,000
Do.....	do.....	.....	.....	.....	65,000	.....
			203,770	219,760	78,520	571,700

Colorado River power will cost nearly as much to deliver in California as power from above projects. Consequently it can not enter through competition. Its entry will be dependent upon agreement with the California companies to postpone their California developments.

## EXHIBIT 14.—Probable growth of load 1926 to 1945, inclusive.

## STATE OF ARIZONA.

[Assume public utility load will increase at 9 per cent until 1925, 8 per cent until 1930, 7 per cent until 1935, 6 per cent until 1940, and 5 per cent until 1945. Assume mining load will be 83,300 kilowatts at 75 per cent load factor and 90 per cent diversity factor in 1926, and will increase at 5.2 per cent until 1935, and 4 per cent thereafter.]

Year.	Public utility load.					Mining load.		Probable load available for Colorado River projects at about 70 per cent load factor (kilowatts).
	Average load, kilowatt years.	90 per cent of average load, hydro, kilowatt years.	Installed hydro. capacity required at 60 per cent load factor.	Assume hydro. installations other than Colorado River will increase at 2 per cent installed capacity will be (kilowatts).	Installed capacity in Colorado River projects (kilowatts).	Average load, kilowatt years.	Installed capacity at 75 per cent load factor (kilowatts).	
1926..	30,000	27,000	45,000	41,900	8,100	56,000	75,000	78,100
1927..	32,400	29,200	48,700	42,800	5,900	58,900	78,800	84,400
1928..	35,000	31,500	52,500	43,600	8,900	61,900	82,500	91,400
1929..	37,880	34,000	56,700	44,500	12,200	65,100	86,800	99,000
1930..	40,800	36,780	61,200	45,400	15,800	68,500	91,300	107,100
1935..	57,200	51,500	86,000	50,200	35,800	88,200	117,600	153,400
1940..	76,600	68,900	115,000	55,300	59,700	107,200	143,000	202,700
1945..	97,700	87,900	146,500	61,100	85,400	130,500	174,000	259,400

Figures on probable mining load deduced from statements of mining companies filed with application of Grand; project No. 121, Arizona.

## EXHIBIT 15.—Possible load for Colorado River power in Arizona and California.

Year.	Arizona (kilowatt 70 per cent load factor).	California (kilowatt 60 per cent load factor).	Combined (kilowatts).	Capacity load factor.	Year.	Arizona (kilowatt 70 per cent load factor).	California (kilowatt 60 per cent load factor).	Combined (kilowatts).	Capacity load factor.
1926.....	78,100	.....	78,100	Per cent.	1930.....	187,100	263,770	310,870	63
1927.....	84,400	.....	84,400	70	1935.....	153,400	423,530	576,930	62
1928.....	91,400	.....	91,400	70	1940.....	202,700	502,050	704,750	62
1929.....	99,000	.....	99,000	70	1945.....	259,400	1,073,750	1,333,150	61

## EXHIBIT 16.—Estimate of gross income that may be expected from sale of Colorado River power.

Year.	Arizona.		California.		Total gross income.
	Kilowatt years that may be sold at point of delivery.	Income at \$60 per kilowatt year.	Kilowatt years that can be sold at point of delivery.	Income at \$55 per kilowatt year.	
1926.....	55,000	\$3,300,000	.....	.....	\$3,300,000
1927.....	60,000	3,600,000	.....	.....	3,600,000
1928.....	64,000	3,840,000	.....	.....	3,840,000
1929.....	69,000	4,140,000	.....	.....	4,140,000
1930.....	75,000	4,500,000	.....	.....	4,500,000
1931.....	81,000	4,860,000	36,400	\$1,000,000	5,500,000
1932.....	88,000	5,280,000	54,600	2,000,000	6,860,000
1933.....	94,000	5,640,000	72,800	3,000,000	8,280,000
1934.....	100,000	6,000,000	91,000	4,000,000	9,640,000
1935.....	107,000	6,420,000	111,000	5,000,000	11,000,000
1936.....	114,000	6,840,000	135,000	7,400,000	12,520,000
1937.....	121,000	7,260,000	158,000	8,700,000	14,240,000
1938.....	128,000	7,680,000	182,000	10,000,000	15,960,000
1939.....	135,000	8,100,000	206,000	11,300,000	17,680,000
1940.....	142,000	8,520,000	230,000	12,700,000	19,400,000
					21,220,000



EXHIBIT 17.—Summary of estimates of cost of construction and predicted earning capacity of four hydroelectric projects on the Colorado River.

	Project.					
	Black Canyon project, 310-foot dam: Includes generating station, transmission lines, and substations.		Black Canyon, Diamond Creek, without storage above Diamond Creek: Includes generating station, transmission lines, and substations.		Black Canyon, Diamond Creek, Glen Canyon: Includes generating station, transmission lines, and substations.	
	Twelfth year of operation.	Ultimate.	Twelfth year of operation.	Ultimate.	Twelfth year of operation.	Ultimate.
Installed power capacity (kilowatts).....	225,000	225,000	412,500	412,500	512,500	825,000
Cost of construction.....	\$64,061,000.00	\$64,061,000.00	\$98,606,600.00	\$98,606,600.00	\$143,396,000.00	\$133,396,000.00
Cost entire project, per kilowatt.....	284.70	284.70	239.50	239.50	280.00	254.00
Cost of separable parts:						
Generating station, dam, and step-up transformer.....	140.00	140.00	145.80	145.80	180.00	185.80
Transmission lines and substations.....	144.70	144.70	94.00	94.00	100.00	98.50
Years till power becomes available.....	3		3		3	3
Depreciation reserves accumulated to end of year.						
Year of operation.						
1.....	\$653,800	\$653,800	\$653,800	\$653,800	\$653,800	\$653,800
2.....	1,367,400	1,367,400	1,367,400	1,367,400	1,367,400	1,367,400
3.....	2,081,000	2,081,000	2,081,000	2,081,000	2,081,000	2,081,000
4.....	2,794,600	2,794,600	2,794,600	2,794,600	2,794,600	2,794,600
5.....	3,508,200	3,508,200	3,508,200	3,508,200	3,508,200	3,508,200
6.....	4,221,800	4,221,800	4,221,800	4,221,800	4,221,800	4,221,800
7.....	4,935,400	4,935,400	4,935,400	4,935,400	4,935,400	4,935,400
8.....	5,649,000	5,649,000	5,649,000	5,649,000	5,649,000	5,649,000
9.....	6,362,600	6,362,600	6,362,600	6,362,600	6,362,600	6,362,600
10.....	7,076,200	7,076,200	7,076,200	7,076,200	7,076,200	7,076,200
11.....	7,789,800	7,789,800	7,789,800	7,789,800	7,789,800	7,789,800
12.....	8,503,400	8,503,400	8,503,400	8,503,400	8,503,400	8,503,400
	10,908,500	10,908,500	13,061,700	13,061,700	13,393,200	14,267,400

EXHIBIT 17.—Summary of estimates of cost of construction and predicted earning capacity of four hydroelectric projects on the Colorado River—Contd.

Year of operation.	Project.			
	Black Canyon project, 310-foot dam: Includes generating station, transmission lines, and substations.	Black Canyon, Diamond Creek, without storage above Diamond Creek: Includes generating station, transmission lines, and substations.	Black Canyon, Diamond Creek, Glen Canyon: Includes generating station, transmission lines, and substations.	Black Canyon, 310-foot dam raised to 550 feet above water level: Includes generating station, transmission lines, and substations.
1.....	—\$640,000	—\$640,000	—\$640,000	—\$640,000
2.....	—911,000	—911,000	—911,000	—911,000
3.....	—977,500	—977,500	—977,500	—977,500
4.....	—705,700	—707,100	—707,100	—705,700
5.....	471,900	206,600	206,600	471,700
6.....	1,844,300	1,618,400	1,618,400	1,833,900
7.....	3,029,200	2,712,100	2,712,100	3,000,900
8.....	4,228,500	4,864,200	4,786,000	4,464,600
9.....	5,492,200	8,059,700	7,887,200	6,388,200
10.....	6,770,300	13,871,700	11,866,000	7,360,800
11.....	8,112,900	17,613,600	17,252,400	11,679,800
12.....	9,459,900	22,120,800	22,479,300	17,468,200

Estimated earnings and surplus or deficit (after interest on bonds and depreciation) accumulated to end of year.

EXHIBIT 18.—Schedule of installation of equipment: Substations and transmission lines.

Year.	Load factor on sub-station assumed as per cent—	Power factor correction at sub-stations assumed as per cent—	Substations.					Inspiration.	Los Angeles.
			Ajo.	Canyon Junction.	Kelvin.	Safford.			
1925	63	98	Transformers 220/60 kv., 25,950 kva.; spare transformers 220/60 kv., 8,650 kva.; total 34,600 kva. Synchronous condensers 9,250 kva. One double circuit, 226,800 cm. A. C. S. R. Transmission line 110 kv.	Transformers 220/150-110 kv., 25,050 kva.; spare transformers 220/150-110 kv., 8,350 kva.; total 33,400 kva. Two single circuit, 500,000 cm. A. C. S. R. 220 kv. transmission line.	Transformers 220/110 kv., 50,400 kva.; spare transformers 16,800 kva.; total 67,200 kva. Transformers 220/150 kv., 41,550 kva.; spare transformers 220/150 kv., 13,850 kva.; total 55,400 kva. Synchronous condensers 36,000 kva. Two single circuit, 500,000 cm. A. C. S. R. 220 kv. transmission line.	Transformers 150/60 kv., 39,300 kva.; spare transformers 150/60 kv., 13,000 kva.; total 52,300 kva. One double circuit, 336,400 cm. 150 kv. transmission line.	Transformers 110/60 kv., 47,300 kva.; spare transformers 15,900 kva.; total 63,200 kva. One single circuit, 336,400 cm. A. C. S. R. 110 kv.	No installation.	
1926	63	98	No installation.	No installation.	No installation.	No installation.	No installation.	No installation.	Do.
1927	63	98	do.	do.	do.	do.	do.	do.	Do.
1928	63	98	do.	do.	do.	do.	do.	do.	Do.
1929	63	98	Transformers 220/60 kv., 3,760 kva.	Transformers 220/150-110 kv., 3,650 kva.	Transformers 220/150 kv., 6,000 kva.; transformers 220/110 kv., 7,200 kva.; synchronous condensers 5,000 kva.	Transformers 150/60 kv., 5,700 kva.	Transformers 110/60 kv., 7,000 kva.	Transformers 110/60 kv., 7,000 kva.	Do.
1930	63	98	No installation.	No installation.	No installation.	No installation.	No installation.	No installation.	Transformers 220/60 kv., 34,100 kva.; spare transformers 220/60 kv., 11,400 kva.; total 45,500 kva. Synchronous condensers 11,800 kva. Two single circuit, 750,000 cm. A. C. S. R. Transmission lines

EXHIBIT 18.—Schedule of installation of equipment: Substations and transmission lines—Continued.

Year.	Lead factor on sub-station assumed as per cent—	Substations.					Los Angeles.
		Ajo.	Canyon Junction.	Kelvin.	Safford.	Inspiration.	
1931	63	Transformers 150/110/60 kv., 5,000 kva. Synchronous condensers 3,160 kva.	Transformer 220/150-110 kv., 5,000 kva.	Transformers 220/110 kv., 10,000 kva.; transformers 220/150 kv., 4,250 kva. Synchronous condensers 6,400 kva.	Transformers 150/60 kv., 7,600 kva.	Transformers 110/60 kv., 9,000 kva.	Transformers 34,100 kva. Synchronous condensers 11,400 kva.
1932	63	No installation.....	No installation.....	No installation.....	No installation.....	No installation.....	Transformers 220/60 kv., 34,100 kva.; transformers 220/60 kv., 11,400 kva. Synchronous condensers 11,400 kva.
1933	63	Synchronous condenser 5,000 kva.	Transformers 220/150-110 kv., 5,300 kva.	Transformers 220/110 kv., 11,000 kva.; transformers, 220/150 kv., 9,100 kva. Synchronous condensers 9,000 kva.	Transformers 150/60 kv., 8,400 kva.	Transformers 110/60 kv., 10,500 kva.	Transformers 220/60 kv., 34,100 kva. Synchronous condensers 13,200 kva.
1934	63	Transformers 150/110/60 kv., 8,300 kva.	No installation.....	No installation.....	No installation.....	One single circuit, 336,400 cm. A. C. S. E. 110 kv. line.	Transformers 220/60 kv., 34,100 kva. Synchronous condensers 41,300 kva.
1935	63	Transformers 150/60 kv., 36,000 kva.; spare transformers, 150/60 kv., 10,000 kva. Transfer 33,350 kva., 110/60 kv. transformers to Inspiration substation. Raise voltage of transmission line to 150 kv.	Transformers 220/150-110 kv., 5,400 kva.	Transformers 220/110 kv., 11,000 kva.; 220/160 kva., 9,100 kva.	Transformers 150/60 kv., 8,700 kva.	Transformers from Ajo substation 33,350 kva.	Transformers 220/60 kv., 34,500 kva. Synchronous condensers 30,000 kva.
1936	70	No installation.....	No installation.....	No installation.....	No installation.....	No installation.....	No installation.
1937	70	Synchronous condenser 7,500 kva.	Transmission line. One single circuit 800,000 cm. A. C. S. E. 220 kv.	Synchronous condensers 33,600 kva.	do.....	do.....	Transformers 46,000 kva. Synchronous condensers 36,000 kva. One single circuit 760,000 cm. A. C. S. E. 220 kv. line.

*Schedule of installation of equipment: Generating stations.*

Year.	Step-up transformers.	Station equipment.
1925...	Transformers 13/220 kilovolt, 118,500 kilovolt amperes.	Three 60-cycle, 3-phase, 13,000 A. C. generators, 37,500 kilovolt amperes, each at unity power factor, -112,500 kilovolt amperes. 3 hydraulic turbines 53,300 horsepower, 160,000 horsepower. 3 hydraulic valves. 3 relief valves. 3 penstocks.
1926...	No installation.....	No installation.
1927...	.....do.....	Do.
1928...	.....do.....	Do.
1929...	Transformers 13/220 kilovolt, 17,300 kilovolt amperes.	One 37,500 kilovolt ampere generator unit as above. One 53,300 horsepower hydraulic turbine with valves and penstock as above.
1930...	Transformers 13/220 kilovolt, 44,800 kilovolt amperes.	One 37,500 kilovolt ampere generator unit as above. One 53,300 horsepower hydraulic turbine with valves and penstock as above.
1931...	Transformers 13/220 kilovolt, 56,100 kilovolt amperes.	One 37,500 kilovolt ampere generator unit as above. One 53,300 horsepower hydraulic turbine with valves and penstock as above.
1932...	Transformers 13/220 kilovolt, 62,700 kilovolt amperes.	One 37,500 kilovolt ampere generator unit as above. One 53,300 horsepower hydraulic turbine with valves and penstock as above.
1933...	Transformers 13/220 kilovolt, 46,100 kilovolt amperes.	One 50,000 kilovolt ampere generator unit as above. One 66,600 horsepower hydraulic turbine with penstock and valves as above.
1934...	Transformers 13/220 kilovolt, 46,100 kilovolt amperes.	One 50,000 kilovolt ampere generator unit as above. One 66,000 horsepower hydraulic turbine with penstock and valves as above.
1935...	Transformers 13/220 kilovolt, 58,400 kilovolt amperes.	One 50,000 kilovolt ampere generator unit as above. One 66,600 horsepower hydraulic turbine with penstock and valves as above.
1936...	Transformers 13/220 kilovolt, 36,100 kilovolt amperes.	One 50,000 kilovolt ampere generator unit as above. One 66,600 horsepower hydraulic turbine with penstock and valves as above.
1937...	No installation.....	One 50,000 kilovolt ampere generator unit as above. One 66,600 horsepower hydraulic turbine with valves and penstock as above.

EXHIBIT 19.—Estimated investment in component parts of projects.

[Not including interest during construction.]

Component part.	Black Canyon project, 310-foot dam.		Black Canyon (Diamond Creek project) without storage above Diamond Creek.		Black Canyon, Diamond Creek, Glen project.		Black Canyon project, 310- foot dam raised to 550 feet above water level.	
	Twelfth year of operation.	Ultimate develop- ment.	Twelfth year of operation.	Ultimate develop- ment.	Twelfth year of operation.	Ultimate develop- ment.	Twelfth year of operation.	Ultimate develop- ment.
Dam, gates, penstocks, tunnels, etc.:								
Black Canyon.....	\$18,860,000	\$18,860,000	\$18,860,000	\$18,860,000	\$18,860,000	\$18,860,000	\$64,860,000	\$64,860,000
Diamond Creek.....			17,431,400	17,431,400	18,271,400	18,271,400		
Glen Canyon.....					26,000,000	26,000,000		
Total.....	18,860,000	18,860,000	36,291,400	36,291,400	63,131,400	63,131,400	64,860,000	64,860,000
Power house, generating equipment and step-up transformers and accessories:								
Black Canyon.....	9,948,400	9,948,400	9,948,400	9,948,400	9,948,400	14,694,400	22,464,000	27,698,000
Diamond Creek.....			6,143,000	6,143,000	11,660,400	16,626,400		
Total.....	9,948,400	9,948,400	16,091,400	16,091,400	21,608,800	31,320,800	22,464,000	27,698,000
Substations.....	5,355,700	5,355,700	7,817,400	7,817,400	11,345,400	15,729,400	11,356,100	15,891,100
Transmission lines.....	24,486,000	24,486,000	26,846,000	26,846,000	32,941,400	46,796,800	33,413,900	41,543,900
Total.....	58,637,100	58,637,100	101,640,200	101,640,200	129,067,000	156,781,400	122,064,000	137,933,000

THIRTY-EIGHTH MEETING, HELD IN THE OFFICE OF THE SECRETARY OF WAR,  
AUGUST 17, 1922.

Meeting called to order at 1.45 p. m.

Present, Secretary Weeks, chairman; Secretary Wallace; O. C. Merrill, executive secretary; Maj. Howard S. Bennion, acting chief engineer; Maj. Lewis W. Call, chief counsel; J. F. Lawson, assistant attorney; and William V. King, chief accountant.

The record of the proceedings of July 26, 1922, was approved.

The executive secretary presented a list of 11 applications received since the meeting of July 26, 1922.

The executive secretary stated that four projects had been advertised since the meeting of July 26, 1922, and that no declaration of intention had been submitted since the last meeting of the Commission.

*Approval of executed licenses.*

The executive secretary presented the following list of licenses, which had been authorized by the Commission in each case, had been accepted by the licensees and had been executed and issued by him since June 30, 1922, under authority of paragraph 8 of the Commission's Orders, No. 2, of August 23, 1920. It was voted that said licenses accepted and issued on the dates respectively named be and the same are approved by the Commission:

Project No. 155:

The Southern Sierras Power Co.  
Snow Creek.  
Cleveland National Forest.  
Riverside County, Calif.  
Accepted on June 20, 1922.  
Issued on August 16, 1922.

Project No. 175:

San Joaquin Light & Power Corporation.  
Kings River.  
Sierra National Forest.  
Fresno County, Calif.  
Accepted on July 19, 1922.  
Issued on July 28, 1922.

Project No. 281:

The California-Oregon Power Co.  
Transmission line.  
Umpqua National Forest.  
Jackson, Douglas, and Lane Counties, Oreg.  
Accepted on June 27, 1922.  
Issued on July 21, 1922.

Project No. 292:

The California-Oregon Power Co.  
Transmission line.  
Shasta National Forest.  
Shasta County, Calif.  
Accepted on June 27, 1922.  
Issued on July 26, 1922.

**Project No. 805:****C. M. Eye.****Transmission line.****Stanislaus National Forest.****Tuolumne County, Calif.****Accepted on July 19, 1922.****Issued on July 28, 1922.***Licenses.*

The executive secretary presented six applications for licenses, upon which action was taken as follows:

1. In the matter of the application of the Utah Power & Light Co. of Augusta, Me. (project No. 20), for a license for a power project on the Bear River and on lands of the United States in Bannock and Caribou Counties, Idaho: Said company having submitted satisfactory evidence of its compliance with the laws of the State of Idaho, as required by section 9, subsection (b), of the Federal Water Power Act, and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto.

2. In the matter of the application of the City of Dothan, Houston County, Ala. (project No. 52), for a license for a power project on the Choctawhatchee River, a navigable waterway of the United States, and in Geneva, Houston, and Dale Counties, Ala., said application being in pursuance of the provisions of a preliminary permit issued to said City on October 1, 1921: Said City having submitted satisfactory evidence of its compliance with the laws of the State of Alabama, as required by section 9, subsection (b), of the Federal Water Power Act, and of its ability to finance the construction of the project works proposed; the maps, plans, and specifications of the proposed project and project works having been provisionally approved by the Commission, and the plans of the dam and other structures affecting navigation having been provisionally approved by the Chief of Engineers and the Secretary of War; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, to such conditions, if any, as the Chief of Engineers may find necessary or desirable in the interests of navigation; and, on account of the character of the foundation materials at the dam site as disclosed by explorations, a further condition as follows:

The licensee shall cause the safety of the dam foundation to be investigated further by calling in for consultation one or more additional qualified experts, shall submit the reports of said expert or experts to the Commission for study,



and shall make such changes in its plans in the interest of safety as may be considered necessary by the Commission after such study.

3. In the matter of the application of the Yuba Development Co. of San Francisco, Calif. (project No. 187), for a license for a power project on the north fork of Yuba River and on lands of the United States partly within the Tahoe and Plumas National Forests, Yuba County, Calif.: Said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b), of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been provisionally approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, to the rules and regulations of the Commission pursuant thereto, and to the following special conditions, and to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Tahoe and Plumas National Forests:

(1) Storage of hydraulic mining débris in Bullards Bar reservoirs in excess of 40,000,000 cubic yards not to be permitted. To insure that this amount is not exceeded the licensee to report annually the number of cubic yards mined in operations dependent on said reservoir for débris storage, and such mining to cease when 40,000,000 cubic yards have been excavated unless further excavation is approved by the Commission, after due showing by the licensee or upon recommendation of the California Débris Commission.

(2) The licensee to comply at all times with the regulations of the California Débris Commission in the construction and operation of the project works.

(3) Nothing in the license or in any agreement made with others by the licensee to be construed to prevent the Commission from authorizing the construction of a higher dam upon the site of the structure licensed and the utilization of the additional storage thereby created whether license covering such further development be granted to the licensee or to others.

4. In the matter of the application of the Little Rock Power & Water Co., of Los Angeles, Calif. (project No. 191), for a license for a power project on Little Rock Creek and on lands of the United States partly within the Angeles National Forest, Los Angeles and San Bernardino Counties, Calif.: Said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b) of the Federal Water Power Act and of its ability to finance the construction of the project works proposed; notice of said application having been given and published as required by section 4 of said act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; the maps, plans, and specifications of the proposed project works having been approved by the Commission; and the Commission finding that said project will be best adapted to a comprehensive scheme of improvement and utilization for the purposes of water-power development and of other beneficial public uses, and

that the license will not interfere or be inconsistent with the purpose for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto.

5. In the matter of the application of Earl Mucklow, of Powell, Wyo. (project No. 333) for a license for a minor power project on lands of the United States partly within the Shoshone National Forest, Park County, Wyo.: The Commission having found that said project is a complete project of not more than 100 horsepower capacity, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said applicant having submitted satisfactory evidence of his compliance with the laws of the State of Wyoming, as required by section 9, subsection (b) of said act; the maps, plans, and specifications of said project having been approved by the Commission; and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and subject also to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Shoshone National Forest.

6. In the matter of the application of the Mt. Shasta Power Corporation of San Francisco, Calif. (project No. 335), for a license for a transmission line and appurtenant structures on and across lands of the United States partly within the Lassen National Forest, Shasta County, Calif.: The Commission having found that said transmission line and structures constitute a minor part only of a complete project, and having, under the authority of section 10, subsection (i) of the Federal Water Power Act, waived the requirements of publication and notice prescribed by section 4 of said act; said company having submitted satisfactory evidence of its compliance with the laws of the State of California as required by section 9, subsection (b) of said act, and of its ability to finance the construction of said line and structures; the maps, plans, and specifications thereof having been approved by the Commission, and the Commission finding that the license will not interfere or be inconsistent with the purposes for which any reservation affected thereby was created or acquired; it was voted that license be issued for a period of 50 years, subject to the provisions of said act and to the rules and regulations of the Commission pursuant thereto, except such as are not necessary in the public interest and may be waived under the authority of said section 10, subsection (i) of said act, and subject also to such further conditions, if any, as the Secretary of Agriculture shall deem necessary for the adequate protection and utilization of said Lassen National Forest.

*Amendment of license.*

In the matter of the application of the Freshwater Bay Lumber Co., of Douglas, Alaska (project No. 241), dated July 28, 1922, and filed with the Commission August 7, 1922, for extension of time of one year within which to begin and complete construction, it was voted that the time for commencement of construction be extended to May 31, 1923, and for completion to May 31, 1924, and that the executive secretary be authorized to execute an amendment of license evidencing such extension.

*Preliminary permits.*

The executive secretary presented two applications for preliminary permits, upon which action was taken as follows:

1 and 2. With respect to the applications of Benjamin H. Hardaway (project No. 303) and G. M. Thomas (project No. 294) the executive secretary stated that Mr. Hardaway had applied for a proposed power development of approximately 1,800 horsepower at Look and Tremble Shoals in the Chipola River near Altha, Fla.; that Mr. Thomas had applied for a proposed power development at White Oak Shoals about 6 miles above Look and Tremble Shoals; and that Mr. Hardaway's proposed project would make a more comprehensive utilization of the power possibilities in Chipola River and be better suited to the interests of navigation than Mr. Thomas's proposed project. The executive secretary further stated that Mr. Thomas had been allowed 30 days to make any showing he might desire why the Commission should not reject his application and grant the application of Mr. Hardaway, but that such showing had not been made.

The Commission thereupon took the following action:

In the matter of the application of Benjamin H. Hardaway, of Columbus, Ga. (project No. 303), for a preliminary permit and license for a power project on the Chipola River, a navigable waterway of the United States, in Calhoun and Jackson Counties, Fla., involving the construction of a dam and power house with appurtenant works: Said applicant having submitted satisfactory evidence of his right to perform within said State of Florida the acts necessary for the purposes of such permit and of his ability to finance the preliminary work and the proposed project, notice of said application having been given and published as required by section 4 of the Federal Water Power Act, full opportunity having been given for all interested parties to be heard, and no application for said project or in conflict therewith having been filed by any State or municipality; and it appearing that said project can be developed into and adapted to a comprehensive scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses, it was voted that preliminary permit be issued for a period of two years, subject to the provisions of said act, and to the rules and regulations of the Commission pursuant thereto, and to the special condition that whenever the United States shall desire to install navigation facilities the licensee shall convey to the United States, free of cost, such of its land and its rights of way and such right of passage through its dams or other structures and permit such control of pools as may be required for such navigation facilities.

It was further voted that the application of G. M. Thomas, of Marianna, Fla. (project No. 294), for a preliminary permit, which conflicts with said application of Benjamin H. Hardaway, be denied.

*Amendment to preliminary permit.*

The executive secretary presented an application filed by Charles B. Hawley, of Washington, D. C. (project No. 223), for amendment to a preliminary permit issued on November 5, 1921, which permit required the permittee to begin foundation explorations and test borings at the site of the dam on or before August 4, 1922. The executive secretary stated that Mr. Hawley requested an extension of three months for commencing foundation explorations, claiming that field work had necessarily been delayed, pending interpretation of the laws of West Virginia affecting water-power development. In accordance with the recommendation of the executive secretary the following action was taken:

In the matter of the application of Charles B. Hawley, of Washington, D. C. (project No. 223), dated July 28, 1922, and filed with the Commission July 29, 1922, for extension of time for three months within which to begin foundation explorations and test borings, it was voted that the time for beginning such explorations and borings be extended from August 4, 1922, to November 4, 1922.

*Declaration of intention.*

The executive secretary presented a declaration of intention submitted under section 23 of the Federal Water Power Act by S. A. Tescher, of Indianapolis, Ind., to develop power on the south fork of the Cumberland River near Burnside, Ky. The executive secretary stated that the matter had been referred to the Chief of Engineers, who had reported that the south fork of the Cumberland River is a navigable water of the United States within the meaning of the law and in earlier years was improved by the Federal Government; that a power dam in the stream would adversely affect the low-water regimen of the Cumberland River below Burnside unless provision were made to insure no diminution of the present low-water flow; and that, conversely, an increased flow at low water would improve conditions below Burnside. The proposed project would, therefore, affect the interests of interstate commerce.

The Commission thereupon took the following action:

In the matter of the declaration of intention of S. A. Tescher, of Indianapolis, Ind., to construct a dam across and in south fork of Cumberland River in the vicinity of Burnside, Pulaski County, Ky., for the purpose of developing power: The Commission having caused investigation of such proposed construction to be made and it appearing upon such investigation that said south fork of the Cumberland River is "navigable waters" within the definition of the Federal Water Power Act and that the contemplated project would affect the navigable capacity of Cumberland River, it was voted that the Commission finds that the interests of interstate or foreign commerce would be affected by such proposed construction.

*Restorations to entry.*

The executive secretary presented four applications for restorations to entry under section 24 of the Federal Water Power Act, upon which action was taken as follows:

1. John R. Bingham, of The Dalles, Oreg., having filed an application (E. Power Reserves, Oregon, DA-54) for a determination to be made with respect to the following-described lands, 76.96 acres in area, near Crooked River, Oreg.:

Willamette meridian, Oregon:

T. 13 S., R. 12 E., sec. 4, lot 3, SE.  $\frac{1}{4}$  NW.  $\frac{1}{4}$ ,  
and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

2. Homer B. Halle, of Madras, Oreg., having filed an application (E. Power Reserves, Oregon, DA-52) for a determination to be made with respect to the following-described lands, 158.75 acres in area, near Deschutes River, Oreg.:

Willamette meridian, Oregon:

T. 10 S., R. 10 E., sec. 28, lots 1, 2, and 3; sec. 29, lot 1,

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission is unable to determine that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

3. Robert S. Skoglund of The Dalles, Oreg., having filed an application (E, Power Reserves, Oregon, DA-53) for a determination to be made with respect to the following-described lands, 160 acres in area, near Crooked River, Oreg.:

Willamette meridian, Oregon:

T. 12 S., R. 11 E., sec. 23, NW.  $\frac{1}{4}$ ;

and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of said lands will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063).

4. Mary Kenyon, of Anatone, Wash., having filed an application (E, Power Reserves, Washington, DA-12) for a determination to be made with respect to certain lands, including the lands hereinafter described, located near Grande Ronde River in Washington, and the facts with respect thereto having been presented by the executive secretary, it was voted that the Commission determines that the value of the following tracts, 81.40 acres in area:

Willamette meridian, Washington:

T. 7 N., R. 44 E., sec. 35, lots 1, 3, and 4,

will not be injured or destroyed for the purposes of power development by location, entry, or selection under the provisions of section 24 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063); but that it is unable to make such determination with respect to other lands included in said application.

#### *Miscellaneous.*

The executive secretary presented an application filed by L. J. Vogter, of Tacoma, Wash., for a preliminary permit for a large power project on the Dosewallips River in Jefferson County, Wash., and stated that the Commission had previously rejected an application by Mr. Vogter for a proposed project of similar nature and magnitude in Alaska, for the reason that Mr. Vogter had failed to show the financial ability or past experience necessary to the successful carrying out of undertakings of such magnitude, and that Mr. Vogter's application does not disclose that he is now any better prepared to carry out the new undertakings than he was to carry out the previous one. The executive secretary recommended that the Commission decline to give consideration to applications not accompanied by reasonable showing of financial ability to carry out the project proposed.

The Commission voted to give no further consideration to Mr. Vogter's application in absence of such showing, and instructed the executive secretary to be guided by the same policy in considering other similar cases that might arise.

The meeting adjourned at 2.10 p. m.

O. C. MERRILL, *Executive Secretary.*



## APPENDIX C.

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### ORDERS OF THE COMMISSION.

#### ORDERS, No. 1.

By authority of section 2 of the Federal Water Power Act, approved June 10, 1920 (Public 280), it is ordered that the Executive Secretary of the Federal Power Commission shall be authorized to draw upon the Secretary of the Treasury all warrants for expenditures out of appropriations heretofore or hereafter made for the use of said Commission.

Done at Washington, D. C., this 31st day of July, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

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#### ORDERS, No. 2.

By authority of section 2 of the Federal Water Power Act, approved June 10, 1920 (Public 280, 66th Congress), and pursuant to the action of the Federal Power Commission at its meeting of July 28, 1920, it is hereby ordered that the duties of the Executive Secretary of the Federal Power Commission, to be performed under the general direction of the Commission, shall be as follows:

1. To administer the Act as executive officer of the Commission and to see that the rules and regulations of the Commission are carried out.

2. To supervise under the Act and regulations all personnel that may be employed by or detailed or assigned to the Commission, and to prescribe their duties within the limits of the Act and regulations.

3. To have general administrative charge of the conduct, preparation, and publication of all investigations, valuations, hearings, and reports authorized or required by the Act, unless otherwise provided by the Commission.

4. To approve vouchers for expenditures incurred on account of salaries and other expenses payable under the provisions of the Act.

5. To administer oaths and affirmations, examine witnesses, and receive evidence as authorized by section 4 (g) of said Act.

6. To formulate, authenticate, and record the findings of the Commission provided for in sections 4 (d), 7, 21, and 23 of the Act, or other sections of the Act, unless otherwise provided by the Commission.

7. To attest all orders, decisions, or regulations of the Commission and to certify under seal copies of such orders, decisions, or regulations, or of any finding, report, map, plan, or other record of the Commission, whenever required for any lawful purpose.

8. To execute and issue permits and licenses under the seal of the Commission.

9. To approve under the seal of the Commission voluntary transfers of licenses, or of the rights thereunder granted.

10. To cancel or terminate permits or licenses under the conditions prescribed in section 5 and in section 13 of the Act, respectively.

Done at the city of Washington, District of Columbia, this 23d day of August, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

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ORDERS, No. 3.

By authority of section 2 of the Federal Water Power Act, approved June 10, 1920 (Public 280, 66th Congress), and pursuant to the action of the Federal Power Commission at its meeting of July 28, 1920, it is hereby ordered that the duties of the Engineer Officer of the Federal Power Commission, to be performed under the general direction of the Executive Secretary, shall be to act as Chief Engineer of the Commission, and to have general charge of its engineering activities.

Done at the city of Washington, District of Columbia, this 23d day of August, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

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ORDERS, No. 4.

By authority of section 7 of the Federal Water Power Act, approved June 10, 1920 (Public 280), and pursuant to the direction of the Commission, it is hereby ordered that the instructions to the Chief of Engineers, issued in compliance with the request of the Commission at its meeting of July 1, 1920, to undertake the investigations and other work of the Great Falls Project, required by said section 7 be, and the same are hereby, confirmed.

Done at the city of Washington, District of Columbia, this 23d day of August, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

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ORDERS, No. 5.

By authority of section 2 of the Federal Water Power Act, approved June 10, 1920 (Public 280, 66th Congress), and pursuant to the action of the Federal Power Commission at its meeting of September 3, 1920, it is hereby ordered that the duties of the Executive Secretary of the Commission shall include, in addition to those prescribed in Orders, No. 2, dated August 23, 1920, the following, namely: To authorize all advertising in newspapers required by section 4 (d) and section 4 (e) of the Act, and such other advertising as may be required in the administration of the Act.

Done at the city of Washington, District of Columbia, this 3d day of September, 1920.

NEWTON D. BAKER, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*



## ORDERS, No. 6.

By authority of paragraph (h) of section 4 of the Federal Water Power Act, approved June 10, 1920 (Public 280, 66th Congress), and in pursuance of the action of the Federal Power Commission at its meeting of September 3, 1920, it is hereby ordered that the following rules and regulations effective on and after the date of execution hereof, being regulations 1 to 10, inclusive, shall govern in the matter covered thereby in the administration of said Act.

Done at the city of Washington, District of Columbia, this 3d day of September, 1920.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

NOTE.—Orders, No. 6 were superseded by Orders, No. 9 of February 28, 1921, which latter prescribed Regulations 1 to 20, inclusive. By Orders, No. 11 of June 6, 1921, certain of the regulations were further amended.

## ORDERS, No. 7.

By authority of paragraph 3 of section 2 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), and in pursuance of the action of the Federal Power Commission at its meeting of November 8, 1920, it is hereby ordered that the following travel regulations shall be effective on and after the date of execution hereof.

Done at the city of Washington, District of Columbia, this 8th day of November, 1920.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

NOTE.—The travel regulations referred to in Orders, No. 7 are printed in pamphlet form.

## ORDERS, No. 8.

Approval having been given by the Commission on December 27, 1920, to the opinion by its Chief Counsel that, as to records not privileged, there is—

no reason why authenticated or unauthenticated copies thereof may not be furnished, and that the Commission may authorize charges for such service and prescribe a schedule for such charges; and that as to records, confidential in their nature, copies thereof should not be furnished,

the following instructions will govern the matter of furnishing copies or official records of the Commission, and the matter of inspecting such records:

1. Fees will be charged for all written copies at the rate of fifteen cents for each hundred words therein (if printed stock forms are used, charge will be made for the written or typewritten portions only); and for copies made by photographic, photolithographic, blue print, or other process, the actual or estimated expenses of reproduction will be charged: *Provided*, That there shall be no charge for the making or verification of copies required for official use by the officers of any branch of the Government: *Provided further*, That a charge of twenty-five cents shall be made for furnishing authenticated copies of any rules, regulations, or other matter printed by the Commission for gratuitous distribution.

2. In event it should appear that the making of any such copies will unduly interfere with the work of the Commission or deplete its appropriations, the Executive Secretary may deny any application, whenever such denial will not

be prejudicial to the interests of the Government; or he may authorize copies to be made at other than expense of the Commission under such arrangement as he may approve.

3. Any person desiring a copy of any record in the Commission must make written application therefor (except in cases coming within the provisos in paragraph 1), stating specifically (a) the particular record of which copy is desired, (b) the kind of copy desired, whether written, photographic, or other, and whether authenticated or unauthenticated, and (c) the purpose for which such copy is desired to be used; and shall deposit the approximate amount of the charge for the copy, which deposit will be returned should the application be denied. Should the amount deposited be found to be insufficient to pay the charge, the desired copy will not be delivered until the deficiency is paid. Any excess deposited will be returned to the applicant when the copy is delivered.

4. The question of whether the furnishing of any desired copy of any record of the Commission is prejudicial to the interests of the Government, whether the particular record is confidential in its nature, and whether the particular interest of the applicant is such as will warrant permission being given to inspect such record, and what is a proper purpose in making inspection, will be determined primarily and promptly by the chief of division to whose work the record pertains, who may, if in doubt, submit the question to the Executive Secretary for decision; or the chief of division may deny the application, in which event the applicant may himself submit the question to the Executive Secretary for decision.

Done at the city of Washington, District of Columbia, this 14th day of February, 1921.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

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ORDERS, No. 9.

By authority of paragraph (h) of section 4 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), and in pursuance of the action of the Federal Power Commission at its meeting of February 28, 1921, it is hereby ordered that the following rules and regulations, effective on and after the date of execution hereof, being Regulations 1 to 20, inclusive, shall govern in the matters covered thereby, in the administration of said Act; and that this order shall supersede Orders, No. 6, of September 3, 1920.

Done at the city of Washington, District of Columbia, this 28th day of February, 1921.

NEWTON D. BAKER, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

NOTE.—Certain of the Regulations 1 to 20, inclusive, prescribed by Orders, No. 9, were amended by Orders, No. 11, of June 6, 1921.

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ORDERS, No. 10.

By authority of paragraph one of section 2 and paragraph (h) of section 4 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063), and in pursuance of the action of the Federal Power Commission at its meeting of May 20, 1921, it is hereby ordered that the following general procedure, when-

ever practicable, be observed in the administration of said Act, and that the Executive Secretary be authorized and directed to take such steps as may be necessary to place such procedure into effect.

Done at the city of Washington, District of Columbia, this 2d day of June, 1921.

JOHN W. WEEKS, *Chairman*.

Attest:

O. C. MERRILL, *Executive Secretary*.

## GENERAL PROCEDURE FOR ADMINISTRATION OF THE FEDERAL WATER POWER ACT.

### I. ACTION BY THE COMMISSION.

("Commission" in the following paragraphs means the Commission itself as distinguished from its executive staff.)

1. The Commission to hold regular meetings at stated intervals, at which time action to be taken on matters initiated by members of the Commission or formulated and presented by the Executive Secretary. Such matters to include the following:

- (a) Findings with respect to effect of power projects upon navigable waters or reservations.
- (b) Authorizations for issuance of permits and licenses, and restoration to entry of lands in power-site reserves.
- (c) Legal opinions.
- (d) Matters of policy or of general administration.
- (e) Appeals.
- (f) Formal orders.
- (g) Regulations.
- (h) Legislation.

2. Special meetings to be held upon call of the chairman when in his judgment necessary in order to avoid delay on pending matters or in case of hearings before the Commission.

### II. ACTION BY EXECUTIVE SECRETARY—GENERAL.

("Executive Secretary" in the following paragraphs includes also the individuals detailed or assigned to the Commission and working under the supervision of the Executive Secretary.)

3. To formulate and present to the Commission for its action matters within the scope of paragraph "1" preceding. Matters arising under divisions "c," "d," "e," and "g" of said paragraph, and in other cases on request of any member of the Commission, to be submitted in written form to the individual members of the Commission prior to the date of the meeting upon which presented for action.

4. To keep minutes of all meetings of the Commission, to record therein the substance of all action taken, and to furnish the individual members of the Commission with copies of such minutes.

### III. PERMITS, LICENSES, AND DECLARATIONS OF INTENTION—GENERAL.

#### (A) ACTION BY THE DEPARTMENTS.

##### (a) FIELD OFFICES.

5. To receive applications, to examine them for conformity with regulations, to secure additions and corrections when necessary, and when complete to submit copy with statement of date of filing directly to the Executive Secretary.

6. When applications are sufficiently complete, to give the public notice, to prepare and arrange for advertising, as required by section 4, subsections (d) and (e) of the Act, and to submit the bill therefor and a certificate of completion of advertisement directly to the Executive Secretary.

7. To make field examination of projects, to prepare reports thereon, including such conditions as may be necessary for the protection of navigation or for the adequate protection and utilization of any reservation involved, and to submit the same to the Executive Secretary through the appropriate Washington office of the Department concerned.

8. Where there are conflicting applications for the same site, or objections have been made to the application, or information is needed which can not be secured through individual investigation, and a public hearing is therefore necessary or desirable, to hold

such hearing in the field wherever practicable and to submit with and in the same manner as the report on the project a record of such hearing, consisting either of stenographic transcript or notes, together with any exhibits filed.

9. To give sufficient supervision to construction, operation, and maintenance of project works to determine whether there is substantial compliance with requirements of license in respect thereto.

(b) WASHINGTON OFFICE.

10. The appropriate Washington office of the several departments to submit to the Executive Secretary, with any additional material or recommendation desired, the reports and records of hearings specified in paragraphs 7 and 8 preceding.

11. When projects involve dams or other structures affecting navigation the Chief of Engineers to approve the same and secure the approval of the Secretary of War, as required by section 4(d) of the Act before license is issued.

(B) ACTION BY EXECUTIVE SECRETARY.

12. Applications filed directly with the Executive Secretary to be examined to determine whether they conform with the regulations, and then to be transmitted to the appropriate department with a statement of the respect, if any, in which incomplete, for submission by such department to its field offices for further action in accordance with paragraphs 5-8 preceding.

13. All applications, whether filed directly with the Executive Secretary or transmitted to him from the field, to be assigned a serial number and appropriate notification made.

14. In all applications involving public lands the Commissioner of the General Land Office to be notified of the areas affected in order that withdrawal may be made under the provisions of section 24 of the Act and that record thereof may be filed with the appropriate land office.

15. Hearings to be held by Executive Secretary when Washington is the most convenient place for such hearings except when the Commission wishes to conduct a hearing itself, or approves the request that it be so conducted. Hearings to be conducted by the Executive Secretary outside of Washington when such hearings can be more conveniently held by him than by others. (This relates particularly to hearings involving applications. For hearings on miscellaneous matters, see paragraph 84 following.)

16. Upon receipt of reports and other papers, the same to be examined in connection with the application, and if no further information required, permit or license, as the case may be, to be prepared and the cases reported to the Commission at its next meeting. If and when approved by the Commission the maps and plans to be approved and the permit or license to be executed and issued by the Executive Secretary.

17. In reporting to the Commission recommendations for the issuance of permits and licenses the Executive Secretary to submit for the approval of the Commission, if the project affects navigable waters, a finding with respect to the use and benefit of such project in interstate or foreign commerce, and, if the project affects a reservation of the United States, a finding that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired.

18. In the case of reports upon declarations of intention the Executive Secretary to make and record on behalf of the Commission the finding required by section 23 of the Act, and, if it is found that the proposed construction will affect interstate or foreign commerce, to treat the declaration as an application for permit or license and to proceed accordingly.

19. In the case of applications for projects of 100 horsepower capacity or less, or for minor parts of complete projects, the Executive Secretary to determine what general requirements may, under the provisions of section 10 (4) of the Act, be waived.

20. Subject to appeal to the Commission, the Executive Secretary to decide between contesting applicants for the same site, to reject those not approved; and, in general, to reject applications if the plans proposed do not provide for adequate development of the site, or if the applicant can not make reasonable showing of financial ability, or if approval of the application would not be in the public interest.

21. Executive Secretary to report to the Commission at its meetings, for entry upon the minutes, applications filed, applications advertised, findings made and proposed, and permits or licenses the issuance of which is recommended.

IV. SPECIAL INVESTIGATIONS.

22. An investigation be made of so much of the Colorado River as will determine the proper relation of power developments on the middle section of the river to irrigation on the headwaters, on the tributaries, and on the lower reaches of the river, such investigation to be undertaken as soon as arrangements can be effected between the

Reclamation Service, the Commission, and the States concerned, and, pending the employment of personnel by the Commission, the Chief of Engineers or the Geological Survey, or both, be requested to detail an engineer to represent the Commission.

23. Similar investigations on other pending cases to be undertaken as soon as arrangements can be made, details or assignments of individuals to be requested from the department or departments in the best position to act for the Commission.

#### V. APPLICATIONS FOR LICENSES UNDER SECTION 23 OF ACT INVOLVING PROPERTY VALUATIONS.

24. Action upon applications in accordance with section 23 of the Act for projects already constructed by applicants who hold or possess permits, rights of way, or other authority heretofore granted, to be suspended until such time as the Commission has authority to employ sufficient personnel to undertake the valuations required, or until the disposition of other cases pending before the Commission makes existing personnel available.

25. When any such applicant is without authority to maintain and operate its project, license to be issued under the conditions that valuation shall be made at the earliest practicable date, that it shall be determined as of the date of issuance of license, and that the licensee shall agree to accept and to enter upon its books as the value of its property on such date the amount determined under the provisions of section 23.

#### VI. POWER SITE RESTORATIONS.

##### (A) ACTION BY THE DEPARTMENTS.

###### (a) FIELD OFFICERS.

26. To receive applications if tendered and to submit same to Executive Secretary with report thereon through the appropriate Washington office. So far as practicable all such applications to be filed with the local land offices and transmitted therefrom through the General Land Office to the Executive Secretary.

###### (b) WASHINGTON OFFICE.

27. To transmit applications with all available data thereon to the Executive Secretary.

28. When determination has been made the General Land Office will record the fact and notify the local land office. All further action will be within the exclusive jurisdiction of the Department of the Interior.

##### (B) ACTION BY EXECUTIVE SECRETARY.

29. On the receipt of applications directly, or by reference from departments, to secure available information from the General Land Office, Geological Survey, or Forest Service, and if adequate information is not thus available, to call for such further information from the appropriate Government agencies as may be necessary. When sufficient information is received, to submit matter to the Commission for the determination required by section 24 of the Act, to certify such determination to the Commissioner of the General Land Office and to record the action taken in the minutes of the Commission.

#### VII. LEGAL OPINIONS AND DECISIONS.

30. Opinions of the Chief Counsel rendered in connection with the work of the Commission to be transmitted to the members of the Commission for information and individual approval, and to be later submitted by the Executive Secretary to the Commission for formal action. If approved by the Commission, such opinions to become decisions of the Commission, and abstracts thereof to be entered upon the minutes of the meeting at which approved. If approved, the Executive Secretary to transmit copies of such decisions to each of the three Departments for their information and record. In case of disagreement the question to be either referred back to the Chief Counsel for further consideration or decided by vote of the Commission, or referred to the Attorney General, as the Commission may determine.

31. In matters involving appropriations of the Commission the question to be formulated by the Executive Secretary and letter to the Comptroller of the Treasury to be prepared for the signature of the Chairman of the Commission.

## VIII. ACCOUNTS AND REPORTS.

82. In conformity with the Rules and Regulations and with the system of accounting adopted, and subject to appeal to the Commission, the Executive Secretary—

- (a) To determine the forms of annual and special reports to be submitted by licensees under the requirements of section 4, subsections (e) and (f) of the act.
- (b) To make investigations, hold hearings, and determine whether the proposals of licensees for the allocation of earnings between project and nonproject property are equitable; whether classification of property for the purpose of depreciation, as proposed by licensees, is reasonable; whether the rates and amounts of depreciation and the reserves established thereby, as required by section 10, subsection (c) of the Act are adequate; and whether the licensee is earning or has earned excessive profits within the meaning of section 10, subsection (b) of the Act.

83. The Executive Secretary to determine benefits which have equitably accrued to any licensee on account of the construction of storage reservoirs or other headwater improvements by another licensee, by a permittee, or by the United States, and to determine the annual charges which should be paid on account thereof, as required by section 10, subsection (f) of the Act.

## IX. HEARINGS AND APPEALS.

84. In cases of request for hearing before the Commission such hearing, unless in any case the Commission decide otherwise, to be held in the first instance by the Executive Secretary and preliminary decision to be made by him on the matter at issue.

85. If those requesting hearing are dissatisfied with the preliminary decision, appeal may be taken to the Commission, in which event an agreed statement of facts, if such can be reached, to be presented to the Commission by the Executive Secretary, together with a digest of the arguments for and against the matter at issue and any briefs or other papers pertinent to the case, for consideration by the Commission at its next regular meeting, at which time opportunity for oral argument to be given if appellant desires and Commission concurs.

86. If no appeal taken, the preliminary decision to be presented by the Executive Secretary to the Commission at its next regular meeting for approval or for such modification as the Commission may direct.

87. Appeals from decisions of Executive Secretary made in accordance with paragraph 20, to be handled in the manner provided in paragraph 35.

## ORDERS, No. 11.

By authority of paragraph (h) of section 4 of the Federal Water Power Act, approved June 10, 1920 (41 Stat., 1063), and in pursuance of the action of the Federal Power Commission at its meeting of May 28, 1921, it is hereby ordered that Regulations 1, 2, 3, 4, 5, 6, 12, 14, 16, 17, 18, 19, and 20 of the Rules and Regulations of the Commission promulgated by Orders, No. 9, of February 28, 1921, be amended as hereinafter set forth; that said regulations so amended shall be effective on and after the date of execution hereof, and shall govern in the matters covered thereby in the administration of said Act; and that any permit or license heretofore issued may, upon written application by the permittee or licensee, be subject to the rules and regulations as herein amended, in lieu of the rules and regulations promulgated by said Orders, No. 9.

Done at the city of Washington, District of Columbia, this 6th day of June, 1921.

JOHN W. WEEKS, *Chairman.*

Attest:

O. C. MERRILL, *Executive Secretary.*

NOTE.—The text of Orders, No. 11, as adopted by the commission, contains the several paragraphs, sections, etc., of regulations as amended. The amended regulations are printed in full in a separate pamphlet compilation, copies of which are available on request.

**ORDERS, No. 12.**

By authority of section 2 of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063), the Federal Power Commission at its meeting of August 15, 1921, amended Orders, No. 2, dated August 23, 1920, and Orders, No. 5, dated September 3, 1920, by adding to each order the following paragraph:

"In the absence of the executive secretary, his duties and authority as hereinbefore conferred shall devolve upon the chief engineer, whose signature as 'Chief Engineer, in the absence of the Executive Secretary,' shall be sufficient to show that his action was taken under the circumstances which entitled him to exercise this authority."

Done at the city of Washington, District of Columbia, this 6th day of October, 1921.

JOHN W. WEEKS, *Chairman.*

Attest:

O. C. MERBILL, *Executive Secretary.*

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## APPENDIX D.

### DECISIONS OF THE COMMISSION UNDER THE FEDERAL WATER POWER ACT.

#### ADVERTISEMENT OF PROJECTS UNDER SECTION 23.

When an applicant has priority by reason of a permit issued pursuant to law previous to the enactment of the Federal Water Power Act and, within the time limited by such permit, applies to the Federal Power Commission for license, advertisement of the project is not necessary.

Chief Counsel to the Executive Secretary, May 14, 1921.

*Subject:* Advertisement of project where applicant has priority under section 23 of the Federal Water Power Act, of June 10, 1920 (41 Stat., 1063).

With reference to the application of James B. Girand for a license for power development on Colorado River at Diamond Creek, Ariz., and a preliminary permit pending the preparation and submission of such plans as the Commission would approve, you have requested an opinion as to whether it is necessary under section 4 (e) of the Federal Water Power Act to advertise this project.

In my opinion of January 31, 1921, in the case of James B. Girand, which was presented to the Commission February 14, 1921, but neither approved nor disapproved, it was held, after reviewing the facts, that the holder of a preliminary permit in force at the passage of the Federal Water Power Act is legally entitled to a license thereunder, provided he complies or has complied with the provisions of the permit and provided he makes his plans conform to the views of the Commission as to the character of development required for the proper utilization of the water resources involved in the public interest. In the memorandum by Mr. E. C. Finney, in the same case, dated January 15, 1921, approved by the Solicitor of the Interior Department and by the Secretary of the Interior, it was held that under section 23 of the Federal Water Power Act the Commission has ample authority to give James B. Girand a priority and to allow him to apply for a preliminary permit or license under the Federal Water Power Act; and that the reference to States and municipalities contained in the other portions of the Federal Water Power Act, *or the requirement as to publication as a prerequisite to awards*, has no application to live permits under section 23 of the act.

The language of section 23 of the Federal Water Power Act gives the holder of any outstanding permit, right of way, or authority, the right to apply to the Federal Power Commission for a license and gives him priority over all other applicants for the development of the proposed project, provided he makes his plans conform to the views of the Commission as to the character of development required to conserve and utilize in the public interest the navigation and water resources of the region. As to applicants under section 23 of the act the holder of the outstanding permit or authority has a priority over all other applicants, and so far as the contesting applicants are concerned, there would be no object in advertising the project. Section 23 applies not only

to outstanding permits where the project works have not yet been built, but to projects which have already been constructed, and there could clearly be no object in advertising the latter. It is a maxim that where the reason of a law fails the law itself fails, and this should be applied in construing the provisions of section 4 (e) of the act. I am of opinion, therefore, that section 4 (e) does not require the advertising of applications for licenses, or preliminary permits pending the completion of the necessary data, where the applicant has a priority under section 23 of the act; in other words, that there is no legal necessity of advertising the case of James B. Girand.

Approved by the Commission, July 11, 1921.

### CLASSES OF WITHDRAWALS INCLUDED IN RESERVATIONS SUBJECT TO THE FEDERAL WATER POWER ACT.

The word "reservations" as used in the Federal Water Power Act includes withdrawals in the first form, for irrigation works, for lands to be irrigated therefrom, under the reclamation act of June 17, 1902 (32 Stat., 388); and also game preserves, bird reserves, etc., withdrawn under the act of Congress approved June 28, 1906 (34 Stat., 536), as refuges or breeding places for game animals and birds.

Chief Counsel to the Executive Secretary, May 4, 1921.

*Subject:* Application of the term "reservations" as defined in the Federal Water Power Act to lands withdrawn for irrigation purposes, game preserves, bird preserves, etc.

My opinion has been requested as to whether or not the word "reservations" as defined in section 3 of the Federal Water Power Act includes:

1. Lands withdrawn under the several forms of withdrawal for irrigation purposes; and
2. Lands within game preserves, bird preserves, etc.

The word "reservations" is defined in the act as follows:

"Reservations" means national monuments, national parks, national forests, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public-land laws; also lands and interests in lands acquired and held for any public purpose.

There are two classes of withdrawals authorized by the reclamation act, approved June 17, 1902 (32 Stat., 388), namely, a withdrawal under the first form of lands that may possibly be needed for the construction and maintenance of irrigation works; and a withdrawal under the second form of lands not supposed to be needed in the actual construction and maintenance of irrigation works but which may possibly be irrigated from such works. A clear distinction is to be made between the two classes of withdrawals. A withdrawal of the first form is a withdrawal of the lands from any sort of disposition, so long as the withdrawal remains in force and is from the necessity of the case absolute. *United States v. Hanson* (167 Fed., 881).

As to the second form of withdrawal, said act of June 17, 1902, in terms authorizes the Secretary of the Interior "to withdraw from entry, *except under the homestead laws*, any public lands believed to be susceptible of irrigation from said works." It provides that "all lands entered and entries made under the homestead laws within areas so withdrawn during such withdrawal shall be subject to all the provisions, limitations, charges, terms, and conditions of this act;" and further "that public lands which it is proposed to irrigate

by means of any contemplated works *shall be subject to entry only* under the provisions of the homestead laws in tracts of not less than forty nor more than one hundred and sixty acres; and shall be subject to the limitations, charges, terms, and conditions herein provided," etc. Under this act, lands withdrawn under the second form of withdrawal were subject to entry under the provisions of the homestead laws, and the Secretary of the Interior had no power to withhold them from disposition (*Edwards v. Bodkin*, 249 Fed., 562; 33 L. D., 104; 42 L. D., 554; 46 L. D., 118). This act was amended, however, by the act of June 25, 1910 (36 Stat., 835), so that no entries are allowed of lands withdrawn under the second form of withdrawal until such time as the Secretary of the Interior issues public notice, which notice operates to remove them out of the classification of withdrawn lands and restores them as lands subject to entry, in conformity with the act. Section 5 of the act of June 25, 1910, *supra*, reads as follows:

"That no entry shall be hereafter made and no entryman shall be permitted to go upon lands reserved for irrigation purposes until the Secretary of the Interior shall have established the unit of acreage and fixed the water charges and the date when the water can be applied and made public announcement of the same."

That this act was designed to withhold lands within a reclamation project from entry of every character until public announcement of the date when water could be applied was clearly settled in the case of *Roberts v. Spencer* (40 L. D., 306).

The definition of "reservations" in the Federal Water Power Act enumerates several species of reservations where the withdrawal from disposition is complete, and follows this enumeration with the general language, "and other lands and interests in lands owned by the United States, *and withdrawn, reserved, or withheld from private appropriation and disposal under the public-land laws*; also lands and interests in lands acquired and held for any public purpose." To bring a reservation within the definition it must appear that the lands were withdrawn, reserved, or withheld from private appropriation and disposal under the public-land laws.

As to lands withdrawn under the first form of withdrawal for irrigation purposes, I am clearly of opinion that they are to be regarded as included under the word "reservations" as defined in section 3 of the Federal Water Power Act, since it is clear that they are withdrawn, reserved, or withheld from private appropriation or disposal under the public-land laws.

As to lands withdrawn under the second form of withdrawal for irrigation purposes, the withdrawal is also complete until such time as the Secretary of the Interior issues public notice which has the effect to subject them to disposition under the provisions of the reclamation act. Thereafter, they are open to homestead entry in conformity with the public-land laws, subject, however, to the charges, restrictions, etc., of the reclamation statute. I am of opinion that after the issue of such notice they cease to be "reservations," as defined in the Federal Water Power Act.

As to lands within game preserves, bird preserves, etc., I understand that these lands are owned by the United States, and are withdrawn from disposition under the public-land laws, being segregated for the purposes for which withdrawn. The first bird preserve was established March 4, 1903, and between that date and October 26, 1908, at least 24 other bird reserves were created, located in the States of Florida, Louisiana, North Dakota, Michigan, Oregon, Washington, and Wyoming. These and subsequent reservations were made by

authority of the President in conformity with a practice of long standing, recognized by acts of Congress and sustained by decisions of the Supreme Court of the United States. They are protected by an act of Congress (34 Stat., 536), which provides:

"That it shall be unlawful for any person to hunt, trap, capture, willfully disturb, or kill any bird of any kind whatever or take the eggs of such birds on any lands of the United States which have been set apart or reserved as breeding grounds for birds by any law, proclamation, or Executive order, except under such rules and regulations as may be prescribed from time to time by the Secretary of Agriculture."

On January 23, 1902, Attorney General Knox, in an opinion to the chairman of the House Committee on the Public Lands (H. R. Rept. 3523, 58th Cong., 3d sess, p. 3), said:

"That Congress may forbid and punish the killing of game on these reserves, no matter that the slayer is lawfully there and is not a trespasser. If Congress may prohibit the use of these reserves for any purpose it may for another; and while Congress permits persons to be upon and use them for various purposes, it may fix limits of such use and occupation and prescribe the purpose and objects for which they shall not be used, as for the killing, capture, or pursuit of specified kinds of game. \* \* \* That the reservation of game is part of the public policy of these States and for the benefit of their own people is shown by their own legislation and they can not complain if Congress upon its own lands goes even further in that direction than the State, so long as the open season of the State law is not interfered with in any place where such law is paramount."

As lands within game preserves, bird preserves, etc., are completely withdrawn from disposition under the public-land laws, so long as the reservation remains in force, I am clearly of opinion that they are to be regarded as coming under the term "reservations" as defined in the Federal Water Power Act.

Approved by the Commission, August 15, 1921.

### PROJECTS UPON POWER RESERVES.

When a project is applied for, situated upon, or partly upon, lands withdrawn as a power reserve, the Federal Power Commission is not required to make the finding provided for in section 4 (d) of the Federal Water Power Act that the occupancy will not interfere or be inconsistent with the purpose for which such reservation was created.

Chief Counsel to the Executive Secretary, June 14, 1921.

*Subject:* Whether the finding specified in section 4 (d) of the Federal Water Power Act is required as to power reserves.

You have requested my opinion as to whether the finding required by the first proviso to section 4 (d) of the Federal Water Power Act applies to—

1. Lands reserved for power purposes by Executive order, or
2. Lands reserved under the operation of section 24 of said act.

The first proviso of section 4 (d) reads as follows:

"*Provided*, That licenses shall be issued *within any reservation only after a finding* by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation."

The term "reservations," as used in the act, is defined in section 3 as meaning:

"National monuments, national parks, national forests, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public-land laws; also lands and interests in lands acquired and held for any public purpose."

It is clear that lands withdrawn or reserved for power purposes are "withheld from private appropriation and disposal under the public-land laws," and are, therefore, within this statutory definition, whether withdrawn by Executive order or under the operation of section 24 of the act. The first part of the proviso quoted above states that licenses "*within any reservation*" shall be issued only upon a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired, but this is followed by the provision that licenses "shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation," indicating, I think, that Congress had in mind only such reservations as are under the supervision of an executive department. Power reserves are under the jurisdiction of the Federal Power Commission, and are not, as such, under the supervision of any executive department. It is only where the power reservation is superimposed upon some other reservation, such as a forest reserve, military reserve, etc., that this part of the proviso can be operative. In such case the license should contain the conditions prescribed by the head of the proper department with regard to such reservation.

For the reasons stated above I am of opinion that as to both classes of reservations the statute does not require a finding of the Commission that the license will not interfere or be inconsistent with the purpose for which the reservation was created. This construction is supported by the fact that such a finding could serve no useful purpose. While within the letter of the statute, power reservations of either class are not within the intent thereof.

Approved by the Commission, August 15, 1921.

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### MINOR PROJECTS UPON INDIAN RESERVATIONS.

When a minor project or a minor part of a complete project is upon an Indian reservation the Federal Power Commission may in its discretion waive any conditions, provisions, or requirements of the act, except the limitation of the license period, the provision which requires compensation to be made, and those conditions prescribed by the department having charge of such reservation, as provided in section 4 (d) of the act.

**Chief Counsel to the Executive Secretary, July 11, 1921.**

*Subject:* Construction of proviso to section 10 (i) of the Federal Water Power Act excepting lands within Indian reservations from operation of said section 10 (i).

My opinion has been requested as to the proper construction of the proviso to section 10 (i) of the Federal Water Power Act, which with the provisions to which it relates read as follows:

"In issuing licenses for a minor part only of a complete project, or for a complete project of not more than 100 horsepower capacity, the Commission may in its discretion waive such conditions, provisions, and requirements of this act, except the license period of 50 years, as it may deem to be to the

public interest to waive under the circumstances: *Provided*, That the provisions hereof shall not apply to lands within Indian reservations."

The question arises in connection with the application of the Idaho Power Co. for a license for transmission line involving the use of 7.2 miles of tribal lands, of a total of 25 miles of line, the remainder of which crosses allotted Indian lands. The question is whether the proviso would preclude the Federal Power Commission from making the waiver authorized by section 10 (i) in matters other than those affecting the tribal lands.

It should be noted that the proviso does not state that the provisions of section 10 (i) shall not apply to licenses involving the use of lands within Indian reservations, but that they "shall not apply to *lands* within Indian reservations." The act as a whole indicates clearly, I think, the purpose of Congress that wherever tribal lands are involved adequate charges shall be imposed for their use and adequate protection given to the Indians with respect to such use.

Construing the proviso under consideration with other provisions of the statute, I am of opinion that it would preclude the Commission from waiving the requirement of the act that adequate charges shall be imposed for the use of tribal lands within Indian reservations for the benefit of the Indians and adequate protection given to such Indians, so that the issue of the license would not be inconsistent with the purposes for which the reservation was made, but that this is its sole purpose; and that as to other provisions of the act the Commission may exercise the authority given by section 10 (i) to waive them.

Approved by the Commission, August 15, 1921.

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### COMPLIANCE WITH STATE LAWS.

Section 9 of the Federal Water Power Act does not require the Federal Power Commission to find that the applicant is the owner of any lands necessary to the construction of his project, or to adjudicate disputed water rights where the applicant has made such filings in a State office and received such consent from the State as may be provided by its laws.

Chief Counsel to the Executive Secretary, November 21, 1921.

*Subject:* Construction of section 9 (b) of the Federal Water Power Act.

In the matter of the protest by John T. Clarke *et al.*, against the issue of a license to the Wyoming Power Co. for power development at Boysen Dam, located in the Big Horn River, in sec. 4, T. 5 N., R. 6 E., W. R. M., about 18 miles south of Thermopolis, Wyo., you desire my opinion as to the evidence required under section 9 (b) of the Federal Water Power Act, which requires that the applicant for a license shall submit to the Commission—

"Satisfactory evidence that the applicant has complied with the requirements of the laws of the State or States within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting, and distributing power, and in any other business necessary to effect the purposes of a license under this act."

In the case in reference the title to the site of the power plant is involved in litigation and while the applicant, the Wyoming Power Co., is in possession of the plant and operating the same it would appear that Mr. Clarke and the interests represented by him probably own the major interest in the site of the plant. This situation gives rise to the question whether an applicant is required to show title to the site of the proposed project before receiving a

license from the Federal Power Commission, or whether section 9 (b) of the act is satisfied if the applicant submits such evidence as the State under its own laws requires to be submitted as a condition precedent to obtaining such rights as the State may grant.

It will be observed that section 9 (b) of the act requires the submission of satisfactory evidence of compliance with the laws of the State within which the project is to be located in the following particulars, which will be considered in their order:

1. With respect to bed and banks;
2. With respect to the appropriation, diversion, and use of water for power purposes; and
3. With respect to the right to engage in the business of developing, transmitting, and distributing power, and in any other business necessary to effect the purposes of a license under this act.

1. I am of opinion that this provision has reference, primarily, to navigable waters and requires that the applicant shall obtain any authority required under State laws in the matter of the occupation of the bed and banks of such waters for power purposes. The authority so required is such authority, if any, as may be required by the statutes of the State for the protection of the navigable waters of the State, and other interests under the control of the State, and does not, I think, include such rights as may be incident to the ownership of the upland bordering on navigable waters. Of course a licensee before constructing his project would have to acquire such lands and riparian rights as would be taken or affected by his project, but such acquisition is not required to be shown as a condition precedent to the grant of the license. The statute leaves the protection of property rights to the courts, and the licensee, if he cannot secure the necessary property rights, other than such as he may own, by purchase, would have to secure them by condemnation proceedings. If, under the laws of the State, the licensee can not have them condemned he can not, of course, construct his project.

2. This requirement has reference to the laws obtaining in the more arid regions of the country with respect to the appropriation of the waters to beneficial uses. The applicant must show that he has obtained, pursuant to the laws of the State, the right to appropriate, divert, and use the water for power purposes. If the applicant has obtained, in compliance with the laws of the State, a permit for the proposed diversion, from the State engineer or other agency of the State having jurisdiction in the matter, such a permit, in my opinion, satisfies the requirement of the statute. No provision is found in the laws of the State of Wyoming requiring that an applicant for a permit to appropriate the water for power purposes must show title to the power site, and I am clearly of opinion that the Federal Power Commission is not required to pass upon this question, but may accept the permit to appropriate the water for power purposes, issued by the proper State authority, as a sufficient showing under the statute.

3. I think this has reference to such requirements as the laws of the State impose with respect to the right of a corporation to do business in the State and to engage in the particular business involved. In some States it is required that a corporation proposing to engage in the business of developing, transmitting, and distributing power must obtain a certificate of convenience and necessity. Where the laws of the State require such a certificate a showing must be made that it has been obtained before a license can be issued by the Federal Power Commission. I do not find in the laws of Wyoming any such requirement.

I have not attempted in this memorandum to consider the conflicting claims of the Wyoming Power Co. and of John T. Clarke et al., with respect to the ownership of the site of the Boysen Dam. Indeed, the title appears to be so involved in litigation that a satisfactory determination of the ownership of the property can not be made until the conclusion of the judicial proceedings affecting the same. This opinion is limited simply to the determination of what evidence must be submitted by an applicant to satisfy the requirements of section 9 (b) of the act.

I am clearly of opinion, having in view the provisions of section 9 (b) of the act and the statutes of the State of Wyoming, the Commission is not required to determine, before issuing a license, that the licensee is owner of the site of the power plant.

Approved by the Commission, January 24, 1922.

### DEPRECIATION.

The authority of the Federal Power Commission to prescribe rules for accounting for depreciation is not limited to the provisions of section 10, subsection (c), of the Federal Water Power Act, but extends to such accounting rules as may be necessary to ascertain net investment and other factors useful in the administration of the act with reference to any project; the term "depreciation" is used in the act in the sense of the exhaustion of capacity for service, or the current lessening in service value, due to the several causes set forth in the definition contained in Regulation 16 of the Commission's rules and regulations; the words "depreciation reserves" mean the credit balances of depreciation accounts created and maintained for the purposes contemplated by the act; the purpose or purposes for which such reserves are required by the act to be established and maintained are that there shall be available out of earnings, assets, or credits sufficient for offsetting the reduction in service value due to accruing depreciation, from whatever cause, and adequate for renewing or replacing, so far as respects their original cost, units of equipment, or of structures when their useful lives expire, in order that, "at the end of any given term of years the original investment remains as it was in the beginning"; and the rules for accounting for depreciation as contained in Regulation 16 are consistent with the act and with other legislation of Congress and are necessary and proper for the purpose of carrying out the provisions of the act.

Chief Counsel to the Executive Secretary, May 6, 1922.

*Subject:* Depreciation under the Federal Water Power Act.

In your memorandum of March 31, 1922, you refer to the hearing before the Federal Power Commission on November 21, 1921, on the application of representatives of the National Electric Light Association and others for amendment of the regulations of the Commission concerning depreciation, amortization, and accounting, and to the claims put forward by said representatives that the authority of the Commission to prescribe rules and regulations concerning depreciation is limited by section 10, subsection (c), of the Federal Water Power Act, approved June 10, 1920 (41 Stat. 1063), and that for this and other reasons Regulation 16, "Depreciation," of the rules and regulations of the Commission, approved by Orders, No. 11, of June 6, 1921, exceeds the authority of the Commission and is not in conformity with the act.

In view of these claims you have requested me to make a careful study of the legal situation and give my views on the following questions:

(1) Whether the authority of the Commission to prescribe rules for accounting for depreciation is, in fact, limited to the provisions of section 10, subsection (c), of the act, and if not, what are the limits of its authority.

(2) What is the meaning of the terms "depreciation" and "depreciation reserves" as used in the act; for what purpose or purposes was it intended that depreciation reserves should be established and maintained; and whether



the rules for accounting for depreciation as contained in Regulation 16 are consistent with the act, and with other legislation of Congress, and necessary and proper for the purpose of carrying out the provisions of the act; and

(8) Whether the definition of "depreciation" as proposed by representatives of the National Electric Light Association and the proposed methods of accounting therefor are consistent with the act and if adopted by the Commission would make it possible to carry out the provisions of the act?

In construing a statute, recourse must be had to the context, and all its provisions must be considered together and so construed as to harmonize the several provisions. It is not safe to base a construction upon a particular word, phrase, or paragraph, for the language of legislative enactments is not always precise and accurate, and besides, one portion may be designed to extend, qualify, and limit another so that the meaning of one portion of the statute may depend upon the effect of another. Hence it is an established rule in the exposition of statutes that the intention of the law giver is to be deduced from the whole and every part of the statute taken and compared together. (See 25 R. C. L., sec. 247, and authorities there cited; also Federal Statutes annotated, 2d ed., vol. 1, sec. 29, p. 44, and authorities there cited.) Bearing in mind this rule of construction, the several provisions of the Federal Water Power Act, in which the word "depreciation" is used, will now be quoted:

"Sec. 3. 'Net investment' in a project means the actual legitimate original cost thereof, \* \* \* plus similar costs of additions thereto and betterments thereof, minus \* \* \* (b) aggregate credit balances of current depreciation accounts. \* \* \*

"Sec. 4. That the commission is hereby authorized and empowered

"(f) To prescribe rules and regulations for the establishment of a system of accounts and for the maintenance thereof by licensees hereunder; \* \* \* to require them to submit \* \* \* statements and reports, including full information as to \* \* \* depreciation and other reserves, cost of project, cost of maintenance and operation of the project, cost of renewals and replacements of the project works, and as to depreciation of the project works \* \* \* ; also to require any licensee to make adequate provision for currently determining said costs and other facts. \* \* \*

"Sec. 10. That all licenses issued under this act shall be on the following conditions:

"(c) That the licensee shall maintain the project works in a condition of repair adequate for the purposes of navigation and for the efficient operation of said works in the development and transmission of power, shall make all necessary renewals and replacements, shall establish and maintain adequate depreciation reserves for such purposes. \* \* \*

"(f) That whenever any licensee hereunder is directly benefited by the construction work of another licensee, a permittee, or of the United States of a storage reservoir or other headwater improvement, the Commission shall require as a condition of the license that the licensee so benefited shall reimburse the owner of such reservoir or other improvements for such part of the annual charges for interest, maintenance, and depreciation thereon as the Commission may deem equitable. The proportion of such charges to be paid by any licensee shall be determined by the Commission."

It is a well-settled rule that statutes should be construed so that every part will have operation and that one section will not destroy another but will explain and support it. (*Bernier v. Bernier*, 147 U. S. 242.) It follows that each section of a statute can not be construed separately but must be construed with reference to every other provision of the statute, so that the statute will be a harmonious whole. It is not to be assumed that a technical word has one meaning in one provision of a statute and another meaning in another provision, but that the word was used in the same sense in every part of the statute. By subsection (h) of section 4 of the act the Commission is authorized "to perform any and all acts, to make such rules and regulations, and to issue such orders, *not inconsistent with this act* as may be necessary and proper for the purpose of *carrying out the provisions of this act*." The authority here conferred is to supplement the act and not to dispense with its provisions.

In view of the above I am clearly of opinion that the authority of the Commission to prescribe rules and regulations, or to issue orders respecting depreciation is not limited to the language or to the purposes expressed in section 10, subsection (c), as above quoted, but that its authority in this respect extends to any purpose "not inconsistent with" the act and "as may be necessary and proper \* \* \* for carrying out the provisions" of the act. In other words, the authority of the Commission over matters affecting the depreciation of project property and the manner and extent of accounting therefor is not limited by the language or to the purposes of any one of them alone, but by the language and the purposes of the act construed as a harmonious whole.

By the terms of the act, as above quoted, licensees are required to establish and maintain adequate depreciation reserves and to give information concerning depreciation of project works and concerning depreciation and other reserves created and maintained. They are required, also, under certain circumstances, to pay a part of the annual charges for depreciation on headwater improvements. In determining the net investment, a deduction is made of the "aggregate credit balances of current depreciation accounts." The term "depreciation," as thus used, is not specifically defined in the act. In its ordinary sense, however, it means the lessening or reduction of value or worth (see *Standard*, *Century*, or *Webster dictionary*). As applied, therefore, to properties of the character affected by the act, it means the lessening in value or worth of such properties whether such value or worth be expressed in terms of money or of capacity for service, and whether due to causes which operate continuously or periodically or from time to time.

In absence of specific definition in the act or of clear implication from its context which shows otherwise, it must be assumed that Congress intended that the term be used in its ordinary and accepted sense. Furthermore, in case of doubt, the intent of Congress may be sought in other acts covering the same subject matter. Statutes *in pari materia*, to which reference may be made in aid of construction, are not only contemporaneous statutes but include previous enactments *in pari materia*. *In re Sanborn* (148 U. S. 222); *United States v. Stevenson* (215 U. S., 190); *United States v. Thomas* (195 U. S., 418). The rule of construction which requires courts to look into former acts upon the same subject, in order to ascertain the meaning of doubtful phrases or provisions, is a wise and salutary one. In this manner courts often ascertain words in a statute to be analogous to the use of the same words in previous statutes, and when so used in such connection and surroundings as to limit their meaning beyond question to a certain interpretation, that interpretation should be followed. *United States v. Union Supply Co.* (215 U. S., 50). Expired or

repealed acts *in pari materia* with the act to be construed may be considered by the court in seeking the correct meaning of words and terms employed in the enactment to be construed. *In re Hohorst* (150 U. S., 660). If a special meaning was attached to certain words in a prior tariff act, for example, there is a presumption of some force that Congress intended that they should have the same significance when used in a subsequent act in relation to the same subject matter. *Latimer v. United States* (223 U. S., 501). See, also, 25 R. C. L., pp. 1060 to 1065, and authorities cited, including authorities to the effect that later statutes may be referred to in determining the meaning of similar words and phrases of prior statutes.

Moreover, the decisions of the Federal courts and commissions under statutes *in pari materia* may be referred to in determining the meaning of doubtful words and phrases of a statute. It is a well-settled rule that when an act of Congress has by actual decisions or by continued usage and practice received a construction by the proper agency charged with its execution and such construction has been acted upon for a succession of years, it must be a strong and palpable case of error or injustice that would justify a change in the interpretation to be given it. Federal Statutes, annotated, 2d edition, volume 1, pages 78 and 79, and authorities cited. In *United States v. Union Pacific Railway Co.* (37 Fed., 551, affirmed 148 U. S., 562), Justice Brewer, in tracing the growth of this principle in our law, observed that "from the time Justice Trimble announced it so cautiously in 1827 it has gained strength every time it was again considered by the court. Impelled by the force of its inherent justice, every judge who has taken it up has stated it more strongly than it was stated before." Furthermore, the weight to be given to such practical construction is increased when Congress, in enacting the law, or another law *in pari materia*, fails to indicate in any way its disapproval of the settled practical construction by the agency charged with its administration. In the case of *New York, New Hampshire, etc., Railroad Co. v. Interstate Commerce Commission* (200 U. S., 361) the court said:

"A construction made by the body charged with the enforcement of a statute, which construction has long obtained in practical execution, has been impliedly sanctioned by the enactment of the statute without alteration in the particular construed when not plainly erroneous, must be treated as read into the statute."

It is clear from these authorities that the decisions of the Federal courts and commissions, and particularly of the Interstate Commerce Commission, construing the word depreciation as used in statutes *in pari materia*, are to be given much weight in construing the word depreciation as used in the Federal Water Power Act.

#### FEDERAL STATUTES.

During the period 1913 to 1921, inclusive, legislation involving depreciation was enacted by Congress as follows:

#### ACT OF MARCH 1, 1913 (37 STAT. 701), AMENDING THE "ACT TO REGULATE COMMERCE."

"SEC. 19a. That the Commission shall, as hereinafter provided, investigate, ascertain, and report the value of all the property owned or used by every common carrier subject to the provisions of this act." \* \* \*

"First. In such investigation said Commission shall ascertain and report in detail as to each piece of property owned or used by said common carrier for its purposes as a common carrier, the original cost to date, the cost of reproduction new, the cost of reproduction *less depreciation*, and an analysis of the methods by which these several costs are obtained, and the reason for their differences, if any." \* \* \*

ACT OF MARCH 4, 1913 (37 STAT. 974, 979), CREATION OF PUBLIC UTILITIES  
COMMISSION OF THE DISTRICT OF COLUMBIA.

"PAR. 16. That every public utility shall carry a proper and adequate *depreciation* account. The Commission shall ascertain and determine what are the *proper and adequate rates of depreciation of the several classes of property of each public utility*. These rates shall be such as will provide the amounts required over and above the expense of maintenance to keep such property in a state of efficiency corresponding to the progress of the industry. Each public utility shall conform its *depreciation* accounts to such rates so ascertained and determined by the Commission. The Commission may make changes in such *rates of depreciation* from time to time as it may find to be necessary. The Commission shall also prescribe rules, regulations, and forms of accounts regarding such *depreciation* which the public utility is required to carry into effect. The Commission shall provide for such *depreciation* in fixing the rates, tolls, and charges to be paid by the public. All moneys in this fund may be expended in keeping the property of such public utility in repair and good and serviceable condition for the use to which it is devoted, or invested, and, if invested, the income from the investments shall also be carried in the *depreciation* fund. This fund and the proceeds thereof shall be used for no other purposes than as provided in this paragraph, unless with the consent and by order of the Commission."

ACT OF OCTOBER 3, 1913 (38 STAT. 166), INCOME TAX LAW.

"SEC. IIB. \* \* \*

"That in computing net income for the purpose of the normal tax there shall be allowed as deductions: \* \* \* sixth, a reasonable allowance for the exhaustion, wear, and tear of property arising out of its use or employment in the business, \* \* \* but no deduction shall be made for any amount of expense of restoring property or making good the exhaustion thereof for which an allowance is or has been made." \* \* \*

ACT OF SEPTEMBER 8, 1916 (39 STAT. 756), REVENUE ACT.

"SEC. 5. \* \* \*

"(a) For the purpose of the tax there shall be allowed as deductions:

\* \* \* \* \*

"Seventh. A reasonable allowance for the exhaustion, wear, and tear of property arising out of its use or employment in the business or trade.

"Title III—Munition Manufacturer's Tax (p. 781).

"SEC. 302. That in computing net profits under the provisions of this title, for the purpose of the tax there shall be allowed as deductions from the gross amount received or accrued for the taxable year from the sale or disposition of such articles manufactured within the United States, the following items:

\* \* \* \* \*

"(f) A reasonable allowance according to the conditions peculiar to each concern, for amortization of the values of buildings and machinery, account being taken of the exceptional depreciation of special plants."

ACT OF FEBRUARY 24, 1919 (40 STAT. 1057, 1066, 1067), REVENUE ACT OF 1918.

"SEC. 214. (a) That in computing net income there shall be allowed as deductions:

\* \* \* \* \*

"(8) A reasonable allowance for exhaustion, wear, and tear of property used in the trade or business, including a reasonable allowance for obsolescence."

## ACT OF FEBRUARY 28, 1920 (41 STAT., 456, 493), TRANSPORTATION ACT.

"SEC. 435. The fifth paragraph of section 20 of the interstate commerce act<sup>a</sup> is hereby amended to read as follows:

"(5) \* \* \* The Commission shall, as soon as practicable, prescribe, for carriers subject to this act, the *classes of property*, for which *depreciation charges* may properly be included under *operating expenses*, and the *percentages of depreciation* which shall be charged with respect to each of such *classes of property*, classifying the carriers as it may deem proper for this purpose. The Commission may, when it deems necessary, modify the classes and percentages so prescribed. The carriers subject to this act shall not charge to operating expenses any depreciation charges on classes of property other than those prescribed by the Commission, or charge with respect to any class of property a percentage of depreciation other than that prescribed therefor by the Commission. No such carrier shall in any case include in any form under its operating or other expenses any depreciation or other charge or expenditure included elsewhere as a depreciation charge or otherwise under its operating or other expenses." \* \* \*

## ACT OF NOVEMBER 23, 1921 (42 STAT., 227, 240), REVENUE ACT OF 1921.

"SEC. 214 (a) That in computing net income there shall be allowed as deductions:

\* \* \* \* \*

(8) A reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence. In the case of such property acquired before March 1, 1913, this deduction shall be computed upon the basis of its fair market price or value as of March 1, 1913."

## DECISIONS OF FEDERAL COURTS AND COMMISSIONS.

The matter of depreciation has been discussed by the courts and commissions in numerous cases involving rates, valuations of properties, issuance of securities, etc. It was dealt with at some length by the Supreme Court in *Knoxville v. Water Co.* (212 U. S., 1), decided January 4, 1909. That case is generally recognized as the leading or basic decision on depreciation, and has been cited by the Supreme Court in several other cases decided since 1909 and in many cases decided by other courts, commissions, etc.

In the *Texas Midland Valuation* case (I. C. C., Val. Rep. 1, p. 1), the Interstate Commerce Commission discusses the meaning of the term "depreciation" and reviews the decisions of the Supreme Court with respect thereto. This case and its citations are particularly pertinent, since it appears that the same arguments were presented by the Interstate Commerce Commission in this case as were presented to the Federal Power Commission at the hearing of November 21, 1921; namely, that so long as property is maintained in full operating efficiency there is no depreciation. The Commission says:

"The act<sup>b</sup> requires us to report in detail as to each piece of property 'the cost of reproduction less depreciation.' In complying with this requirement the bureau<sup>c</sup> has treated depreciation as the *exhaustion of capacity for*

<sup>a</sup> Formerly known as the "act to regulate commerce."

<sup>b</sup> Sec. 19a of the act to regulate commerce (37 Stat., 701).

<sup>c</sup> Reference is to the Commission's Bureau of Valuation.

service. It has inquired how much of such capacity existed when new, what part has been used up, and what part still remains. It states the remaining capacity as a fraction of which the total is the denominator and the part remaining the numerator. Taking cost of reproduction new the depreciation which has already accrued subtracted, due consideration being given to salvage or scrap when this exists, and the remainder is given as cost of reproduction less depreciation.

"The carrier insists that this conception of depreciation is wrong; that the inquiry should be whether the property is in 100 per cent efficiency. So long as it is maintained at 100 per cent efficiency, or what comes to the same thing, so long as there is no deferred maintenance, there can be no depreciation.

"This is clearly stated in the brief of the carrier, where it is said:

"It is apparent, from the testimony received on the subject of depreciation and from the questions and statements of the director during the introduction of the same, that *the principal difference is one of definition of depreciation*. The witnesses called by the carriers—men of candor, ability, and experience—while fully recognizing deterioration from age and use and the necessity of repairs and replacements of perishable elements, state that *in the absence of deferred maintenance there is no depreciation*."

"It will be seen, therefore, that the question presented by the record in this case, for determination touching depreciation is whether the theory of the bureau <sup>(\*)</sup> or that of the carrier is correct.

"When the act was passed the phrases 'cost of reproduction new' and 'cost of reproduction less depreciation' had come to have a clearly defined and well understood meaning. The conception of depreciation as used in this connection was the equivalent of that put upon it by the bureau. There were differences of opinion as to the part which physical deterioration and functional depreciation should play and all persons were not agreed whether depreciation and life were essentially identical; that is, whether an article might not depreciate more rapidly in the first years of its existence than in the last, or vice versa, but all were agreed upon the fundamental concept that *depreciation means decline in value due to loss of capacity for service*. An article was assumed to have incorporated in it a certain amount of use when new; a certain part of that use had gone and so much remained.

"Reference might be made to hundreds of instances in which this idea of depreciation when the act was passed had been used in valuation proceedings by individuals, by commissions, and by courts. It is doubtful if any case can be found where it had been deliberately assumed that depreciation and deferred maintenance were synonymous.

"Not only have valutors and utility commissions adopted this view of depreciation, but the same definition has been assumed and acted upon by courts, including the Supreme Court of the United States.

"This question was first definitely before that court in *Knoxville v. Water Co.* (212 U. S., 1). It was held that in determining the value of a water plant upon the basis of reproduction cost, the depreciation which had already accrued must be taken into account. It is evident from the language of the opinion that the depreciation which the court had in mind was exactly the kind of depreciation which the bureau has applied. The court said, at pages 9 and 10:

"The cost of reproduction is one way of ascertaining the present value of a plant like that of a water company, but the test would lead to obviously incorrect results if the cost of reproduction is not diminished by the *depreciation*

(\*) Reference is to the Commission's Bureau of Valuation.

*which has come from age and use.* \* \* \* The items composing the plant depreciate in value from year to year in a varying degree. Some pieces of property, like real estate, for instance, depreciate not at all, and sometimes, on the other hand, appreciate in value. But the reservoirs, the mains, the service pipes, structures upon real estate, standpipes, pumps, boilers, meters, tools and appliances of every kind begin to depreciate with more or less rapidity from the moment of their first use. It is not easy to fix at any given time the amount of depreciation of a plant whose component parts are of different ages with different expectations of life. But it is clear that some substantial allowance for depreciation ought to have been made in this case.' \* \* \*

"On pages 13 and 14 the following occurs:

*"A water plant, with all its additions, begins to depreciate in value from the moment of its use. Before coming to the question of profit at all the company is entitled to earn a sufficient sum annually to provide not only for current repairs but for making good the depreciation and replacing the parts of the property when they come to the end of their life. The company is not bound to see its property gradually waste, without making provision out of earnings for its replacement. It is entitled to see that from earnings the value of the property invested is kept unimpaired, so that at the end of any given term of years the original investment remains as it was at the beginning. It is not only the right of the company to make such a provision, but it is its duty to its bond and stockholders, and in the case of a public service corporation at least its plain duty to the public."*

"This case is full authority for the proposition that depreciation is not deferred maintenance but covers loss of capacity for use due to age, inadequacy, etc.

"The Supreme Court approves the same idea of depreciation in *Cedar Rapids Gas Co. v. Cedar Rapids* (223 U. S., 655). The report of that case does not clearly show the manner in which depreciation was treated, but the record does. The master determined the cost of reproduction and subtracted from that the depreciation estimated according to the rule approved by the court in the *Knoxville Water Case*, *supra*. The gas company did not attack the correctness of this method, but claimed that a sufficient amount was not allowed for depreciation in stating its annual net return. The valuation as fixed by the master and by the court below was approved by the Supreme Court.

\* \* \* \* \*

"To the same import is *Des Moines Gas Co. v. Des Moines* (238 U. S., 153). The questions presented to the court in this case were upon going-concern value and the cost of replacing certain pavement, but the method of valuation was approved. The master had determined the value of the property by ascertaining the cost of reproduction new and subtracting therefrom depreciation. That this depreciation which the court approved was not mere deferred maintenance but was estimated upon the theory applied by the bureau clearly appears from the language of the court. \* \* \*

\* \* \* \* \*

"The *Minnesota Rate Cases* (230 U. S., 352) are full authority for this same proposition. The question before the court was upon the value of the property of certain carriers. The master in determining this value had ascertained the cost of reproduction new but had declined to make any deduction on account of depreciation, holding that appreciation in its various forms would more than offset depreciation. This method of treatment was disapproved by the Supreme Court which held that appreciation if it existed should be shown and

that depreciation must be subtracted. What the court meant by depreciation clearly appears from the opinion, where, on pages 456 and 457 it is said:

"The master allowed the cost of reproduction new without deduction for depreciation. It was not denied that there was depreciation in fact. As the master said, 'everything on and above the roadbed depreciates from wear and weather stress. The life of a tie is from 8 to 10 years only. Structures become antiquated, inadequate, and more or less dilapidated. Ballast requires renewal, tools and machinery wear out, cars, locomotives, and equipment, as time goes on, are worn out or discarded for newer types.' But it was found that this depreciation was more than offset by appreciation. . . \* \* \*

"We can not approve this disposition of the matter of depreciation. It appears that the master allowed, in the cost of reproduction, the sum of \$1,613,612 for adaptation and solidification of roadbed, this being included in the item of grading and being the estimate of the engineer of the State commission of the proper amount to be allowed. It is also to be noted that the depreciation in question is not that which has been overcome by repairs and replacements, but is the actual *existing depreciation* in the plant as compared with the new one. It would seem to be inevitable that in many parts of the plant there should be such depreciation, as for example in old structures and equipment remaining on hand. And when an estimate of value is made on the basis of reproduction new, the extent of *existing depreciation* should be shown and deducted. This apparently was done in the statement submitted by this company to the Interstate Commerce Commission in the *Spokane Rate Case* in connection with an estimate of the cost of reproduction of the entire system as of March, 1907. (See 15 I. C. C. Rep. 395, 396.) \* \* \*

"The *Knorrville Water Case* was decided in 1909, the *Minnesota Rate Cases* in 1913. In the interval much had been said upon this subject of depreciation but the above quotation clearly shows that the Supreme Court had in no respect departed from the rule originally laid down.

\* \* \* \* \*

"It is clear therefore that when the act was passed the word 'depreciation,' as used in the phrase 'cost of reproduction less depreciation,' had acquired a definite meaning. It must be assumed that Congress used the word in that sense. *Nor is there to-day any other recognized meaning.* We approve and adopt the definition of depreciation which the bureau has applied in this case.

"While this disposes of the general contention made by the carrier upon this record, and while no general discussion of the evidence presented seems necessary, a word should perhaps be said as to one phase of that testimony.

"Many witnesses were produced by the carrier who testified that certain articles, especially rolling stock, could by repairs and renewals be indefinitely continued in service and that therefore it was impossible to assign to such articles a total life or a remaining life.

"This testimony does not tend to support the contention of the carrier that depreciation and deferred maintenance are identical. Even though it may be possible to prolong without limit the life of a car by supplying different parts as they wear out, it would by no means follow that an old car is of the same value, *estimated either in dollars or in service units*, as a new car; the real point of the testimony is that the method of the bureau can not as a practical matter be applied.

"This testimony does not state the exact fact. Cars do go out of service, but it is true that ordinarily a new car of the same type would not be ordered to replace the old car. In other words, cars are ordinarily sent to the scrap heap because they are obsolete or inadequate rather than because they can not be repaired."



## DEFINITIONS OF DEPRECIATION BY FEDERAL AGENCIES.

## INTERSTATE COMMERCE COMMISSION.

The Interstate Commerce Commission, in establishing a uniform system of accounts for telephone companies, in effect January 1, 1913, defined depreciation as follows:

*"Depreciation of plant and equipment.*—Telephone companies should include in operating expenses depreciation charges for the purpose of creating proper and adequate reserves to cover the expenses of depreciation currently accruing in the tangible fixed capital. By *expense of depreciation* is meant—

"(a) The losses suffered through the current lessening in value of tangible property from wear and tear (not covered by current repairs);

"(b) Obsolescence or inadequacy resulting from age, physical change, or supersession by reason of new inventions and discoveries, changes in popular demand, or public requirements; and

"(c) Losses suffered through destruction of property by extraordinary casualties."

The same Commission, in the appendix to its decision of July 31, 1918, *supra*, on the valuation of Texas Midland Railroad, defined depreciation as the "lessening in cost value due to the smaller number of service units in the property as found, than in the same property new," and classified depreciation as *physical* and *functional*, defining these terms as follows:

"Physical depreciation is due to deterioration through age or wear. A piece of property will sometimes deteriorate as rapidly when standing idle as when in active service, while in other instances the deterioration is very slight unless in use. *The real question always is what part of the physical life of this piece of property has gone*, whether from the mere fact of age or from service.

"Functional depreciation results from the want of adaptation to function. While in working condition, a machine for some reason can no longer perform the work required of it, and, therefore, although still physically fit, must go out of service. This may be because the machine is too small, or because some better process has been invented, or for various reasons which render its further use impossible or undesirable."

After discussing depreciation, as based on the estimated service life of the various pieces or classes of property, the Commission said:

"From the foregoing it will be seen that the effort of the Commission is to state with respect to each piece of property the number of *service units* which that property now has for the purpose for which it is being used as compared with new. In determining that fact an inspection of the property is made and the experience of the past, both as developed by the records of the carrier under valuation and from that of other carriers as well, is considered in the light of present knowledge and conditions.

"By each piece of property is not necessarily meant each unit, since several units of the same class may sometimes be combined and considered as one piece. Thus the ties or the rails of a given class upon one valuation section might be treated as a single piece of property in stating depreciation."

## BUREAU OF INTERNAL REVENUE.

In Bulletin F, issued by the Bureau of Internal Revenue in 1920, depreciation and obsolescence, as used in certain provisions of the revenue act of 1918, are defined as follows:

*"Depreciation* means the gradual reduction in the value of property due to physical deterioration, exhaustion, wear and tear through use in trade or business.

"*Obsolescence* means the gradual reduction in the value of property due to normal progress of the art in which the property is used, or to the property becoming inadequate to the growing needs of the trade or business. Obsolescence, a gradual lessening of value, must be distinguished from 'loss of useful value' (Art. 143, Reg. 45), which contemplates an abrupt termination of usefulness."

In Regulation 45, issued in 1920 and relating to the matter of deductions from income for the "exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence," as provided by the revenue act of 1918, it is said:

"*Depreciable property.*—The necessity for a depreciation allowance arises from the fact that certain property used in the business *gradually approaches a point where its usefulness is exhausted*. The allowance should be confined to property of this nature. In the case of tangible property, *it applies to that which is subject to wear and tear, to decay or decline from natural causes, to exhaustion, and to obsolescence due to the normal progress of the art or to becoming inadequate to the growing needs of the business*. It does not apply to inventories or to stock in trade; nor to land apart from the improvements or physical development added to it. It does not apply to bodies of minerals which through the process of removal suffer depletion, other provision for this being made in the statute. See articles 201-233. *Property kept in repair may, nevertheless, be the subject of a depreciation allowance*. See article 103. The deduction of an allowance for depreciation is limited to property used in the taxpayer's trade or business." (Art. 162.)

In Regulation No. 39, issued October 24, 1916, as Treasury Decision No. 2384, depreciation as used in the munitions tax law of September 8, 1916, is defined as follows:

"The deduction authorized on account of depreciation relates to the *loss due to use, wear and tear of physical property*, owned and used by the manufacturer, but which is not specially designed or installed for the purpose of manufacturing munitions or parts thereof, and which, without material alteration and change, may be used in connection with any other business in which the person is or may be hereafter engaged.

"*The annual deduction on this account will be a reasonable allowance determined upon the basis of the cost and probable number of years constituting the life of the property.*

"If the same building and machinery or other equipment are used coincidentally for purposes other than the manufacture of munitions or parts thereof, then the amount deductible from the gross income returned for the purpose of this title on account of depreciation will be apportioned in accordance with the rule hereinbefore set out for apportioning running expenses, and the deduction from the gross income contemplated by this title will be made accordingly." (Art. 20.)

#### WAR CONTRACTS.

In a pamphlet issued in July, 1917, entitled "Uniform Contracts and Cost Accounting Definitions and Methods," which contains "Recommendations by interdepartmental conference, consisting of delegates from the Departments of War, Navy, and Commerce, the Federal Trade Commission, and the Council of National Defense," the following recommendation is made with respect to depreciation:

"In determining depreciation it is desirable (1) to agree on a proper rate, taking into consideration the use of the plant for purposes other than war orders, (2) to have the contractor make a representation as to his actual

cash investment in plant, machinery, tools, fixtures, and the like, subject to investigation as to correctness, and to apply the rate agreed upon to the sum fixed or corrected, as the case may be.

"The rate of depreciation depends upon many different and variable factors, some of the most important of which are as follows:

"(a) Nature and construction of buildings and equipment, together with their condition.

"(b) Deterioration of plant in general and of machinery in particular, due to wear and tear.

"(c) Amount spent for maintenance in the way of repairs and renewals.

"(d) The invention of new methods or new machines which may or may not entirely replace the old ones.

"(e) Permanency of business, and likelihood of increase or decrease in the same.

"(f) Amounts previously written off for depreciation.

"(g) There are many additional factors, such as amortization, peculiar and excessive use of machines, rate of production, idleness of plant, etc., all of which enter into the problem."

#### STATE STATUTES.

Questions concerning depreciation and methods of accounting therefor when affecting intrastate public utilities are within the authority of the States under administrative commissions created by State statutes. The principles set forth in such statutes and in the practices and decisions of such commissions are corroborative evidence of the accepted meaning of the word "depreciation" and of the accepted practices respecting accounting therefor.

In *Arizona* the public utility commission is authorized by act of May 28, 1912 (ch. 90, Laws of 1912), to require public-service corporations to carry a proper and "*adequate depreciation*" account in accordance with such rules, regulations, and forms of account as the Commission may prescribe." It is further provided that the Commission may "*fix the proper and adequate rates of depreciation of the several classes of property of each public-service corporation.*"

In *Illinois*, the act of June 27, 1921 (house bill 711), empowers the public utility commission to "require any or all public utilities to keep such accounts as will *adequately reflect depreciation, obsolescence, and the progress of the arts,*" and empowers the commission to "ascertain and determine and by order fix the proper and adequate rate of depreciation *for the several classes of property for each public utility.*"

In *Indiana* the public service commission act of 1913 (sec. 22), requires every public utility to "carry a proper and adequate depreciation account whenever the commission after investigation shall determine that such depreciation account can be reasonably required," and authorizes the commission to "ascertain and determine what are the proper and *adequate rates of depreciation of the several classes of property of each public utility.*"

In *Kansas* the public utilities and railroad law provides (ch. 238, sec. 24, Laws of 1911) that each public utility shall furnish to the commission "in such form and at such time as the commission shall require, such accounts, reports, and information as shown in itemized detail: (1) *The depreciation per unit;* (2) *the salaries and wages, separately, per unit.*"

In *Nebraska* the constitution provides: "No dividends shall be declared or distributed except out of net earnings after paying all operating expenses, including a depreciation reserve sufficient to keep the investment intact."

In *Ohio* the public utility laws of 1913, section 490, authorizes the public utility commission in ascertaining the value of various kinds and classes of property of each public utility or railroad to ascertain "depreciation, if any, from the new reproduction cost as of a date certain, for existing mechanical deterioration, for age, for obsolescence, for lack of utility or for any other cause, the percentage and amount of each class of depreciation, if any, to be specifically set forth in detail."

In section 614-49, it is provided that "every public utility shall carry a proper and adequate depreciation or deferred maintenance account, whenever the commission, after investigation, shall determine that a depreciation account can be reasonably required"; and it is provided that the "commission shall ascertain, determine, and prescribe what are proper and adequate charges for depreciation of the several classes of property for each public utility," etc.

In *Oregon* (Laws of 1920, sec. 6046) the commission is also authorized to "ascertain and determine what are the proper and adequate rates of depreciation of the several classes of property of each public utility." Similar provisions are contained in the statutes of Pennsylvania (public service company law, July 26, 1913); Tennessee (public utilities law, February 21, 1919, ch. 49); and New Jersey (public utilities law, ch. 195, Laws of 1911, as amended).

#### DECISIONS OF STATE COMMISSIONS.

In the case of the Long Island Lighting Co., decided by the New York Public Service Commission on November 23, 1921, two days after the hearing of November 21, 1921, before this Commission, the same argument was made that was made at the hearing, namely, that there is no depreciation in property which is maintained at full operating efficiency. The New York commission in its decision said:

"In this State existing accrued depreciation is to be deducted in determining fair value and the annual depreciation as it accrues in the operation of the properties is to be provided for in the rate charged to consumers for service. (*Knoxville v. Knoxville Water Co.*, 212 U. S. 1, 18; *People ex rel. Jamaica Water Supply Co. v. Tax Commissioners*, 196 N. Y. 39, 57, 58; *People ex rel. Binghamton Co. v. Stevens*, 203 N. Y. 7, 22, 23; *People ex rel. Kings County Lighting Co. v. Willcox*, 156 App. Div. 603, 610; *Cedar Rapids Gas Co. v. Cedar Rapids*, 223 U. S. 655; *Des Moines Gas Co. v. Des Moines*, 238 U. S. 153, 162; *Minnesota Rate Cases*, 230 U. S. 352, 456.)

"It has been contended in this present proceeding that there is no depreciation in the property for the reason that if maintained and replaced in the course of operation the efficiency of the property continues to be at 100 per cent. This theory was presented to the court in the *Kings County Lighting Co.* case, above mentioned, and before the appellate division was elaborately argued.

"The appellate division, in its decision (156 App. Div. 603, 616), after quoting a portion of the opinion in the *Knoxville* case (212 U. S. 1, 13), said:

"This quotation completely answers the contention on the part of the relator that no allowance should be made for depreciation, because the evidence is that the efficiency of the relator's plant continued to be equal to 100 per cent; since it is manifest that deterioration to some extent must precede the loss of efficiency, and the mere fact that the efficiency remains stable does not necessarily contravene the other fact that deterioration has set in."

*"The property may be 100 per cent efficient for operating purposes but not be at anything like 100 per cent as representing what the securities outstanding were put out for or what the properties, as shown by the balance sheet, have cost the investors. Securities authorized by the Commission should be protected by the rates fixed by the Commission, provided the property has been kept up in efficiency and in value and a sufficient depreciation reserve has been maintained to be applied when the time comes for that purpose. The various buildings and apparatus which are used in the service of a public utility corporation have been designed to work and to last in their working as long as possible. The value of such items in any operating property is the ability of the items to give their service, and if the power to give service is partly exhausted and the items are on the way to the point where severally they have to be discarded and replaced by new, there is a lessened power to serve in the plant represented at least by what the necessary replacement items not yet put in will cost. There is no reason why this partial exhaustion of capital or value should not be regarded in determining the value of the property and the rate of return which the consumer is to be called upon to pay to the investor for the use of the latter's property estimated upon the basis of the cost of that property less such depreciation. The reserve for amortization of capital, that is to say, for such depreciation, is required to be shown by the Commission's uniform system of accounts. This reserve, set up by the company itself, is the company's own admission of an accrued depreciation, and as far as it will go should be deducted from fixed capital shown by the books in endeavoring to determine the value of the properties less the depreciation which has come about in the course of operation. There may be no such reserve provided by the company; but whether or no there is such reserve, there is such depreciation in fact and to the extent that the property has fallen away in its ability to continue to give service without replacement of worn-out parts it has ceased to be used in the public service and the consumer of its service should not be called upon to pay a return to the owner for the use of property which is not then or there in the plant. One may call this partial exhaustion theoretical, if he likes. It is true the exhaustion is not complete, so that work stops, but it is real all the same. There are those who use the word 'theoretical' and the words 'theoretical depreciation' in this connection in order that we may be made to believe that the thing is mythical and does not exist at all, but there is nothing that is less mythical than the partial exhaustion of the power to work and ultimate death.*

*"The consumer, however, should in the rate that he pays for the service given by the properties cover an amount which shall provide as part of the operating costs for the annual accruing depreciation in order to keep up not only the efficiency of the property as an operating property, but also to keep up the continued value of the property for service in the future. This value for service is what is really back of the securities authorized to be issued by the company."*

The Wisconsin Railroad Commission, in its decision of May 1, 1920, on the application of the Wisconsin-Minnesota Light & Power Co. for revision of its gas rates, considered at length the meaning and purpose of depreciation, and among other things said:

*"The purpose of providing a reserve for depreciation in a public utility business is not necessarily to provide sufficient funds for replacing the property as it ceases to be useful, but rather the purpose is to hold in the business out of earnings obtained during the usefulness of a certain property a sufficient amount to protect the utility from loss when it becomes necessary to abandon the*

*property.* The depreciation reserve is not for the purpose of providing any additional capital which may be required to replace the original property with better or more expensive property. To use the depreciation reserve for such a purpose would mean that in the end the plant account would bear very little relation to the actual historical cost of the property in existence at any time. On the other hand, the use of the reserve for its proper purpose, as outlined here, means that a close relationship will be kept between the actual cost of the property and the investment as shown in the property and plant account—assuming that proper accounting procedure has been followed in other respects.

\* \* \* \* \*

"A renewal of property involves two operations: (1) The removal or abandonment of worn out, obsolete, or inadequate property, and (2) the installation or construction of the new. *The depreciation reserve has a relation to the first of these operations only.* Omitting consideration of the cost of removal and of the salvage value which bear upon details of accounting procedure and not upon the principles underlying the accounting for renewals and replacements, the accounting procedure is very simple. *As property is retired from service its original cost should be credited to the appropriate plant account and charged to the depreciation reserve. This done, the old property is cleared off the books and that which takes its place is to be accounted for in the same manner as if it were an extension of the plant where no plant had existed theretofore. From the standpoint of correct accounting, therefore, there is no such operation as a renewal of property. Instead there is a retirement of property discarded, and then, as a separate transaction, the construction or installation of new property.*

"Part of the confusion regarding the accounting for depreciation and the purposes to be served by a reserve for depreciation is doubtless due to the inadequacy of the procedure prescribed in classifications of accounts established by public authorities, including this commission, and to the failure of such classifications to conform to the nature of the transactions involved."

Many other decisions of public utility commissions might be cited to similar effect. They will be found in the recent reports of the respective commissions. It is sufficient to observe that no decision or report has been found which would support the claims made by the representatives of the National Electric Light Association.

It will appear from the foregoing that, while Federal statutes and Federal courts, commissions, and other agencies have used different forms of expression in defining depreciation, the same principle applies throughout; that depreciation is held to be the exhaustion of capacity for service, or the current lessening in service value due to wear and tear, casualty, or obsolescence; and that these agencies have recognized that this exhaustion of capacity or lessening in service value begins to accrue "from the moment of its use." This view is corroborated by the citations given from State statutes and from decisions of State commissions.

The definition of depreciation as contained in Regulation 16 is as follows:

"By the term 'depreciation' is meant the losses, either temporary or permanent, suffered through the current lessening in service value of tangible physical property due to wear and tear from operation and the action of time and the elements which are not replaced by current repairs, as well as those ordinary losses in capacity for use or service sustained by physical property from obsolescence or inadequacy due either to age, physical change, or supersession resulting from new inventions, discoveries, change in popular demand, or requirements of public authority; also decreases in the service value of intangible

property and tangible nonphysical property through lapse of time or other causes."

A comparison of this definition with those in the citations preceding discloses no material difference in the methods approved and no difference in principle. I am clearly of opinion that the Federal Water Power Act uses the word "depreciation" in the sense approved in the decisions and definitions cited above, and that the definition of said word in the rules and regulations of the Commission is a correct interpretation of the intent of the act.

The act requires that licensees shall establish and maintain "adequate depreciation reserves" and that in determining the net investment there shall be deducted from original cost, plus cost of additions and betterments, the "aggregate credit balances of current depreciation accounts." A depreciation reserve is a credit balance in an account to which is credited such amounts as may be charged to other accounts for depreciation of property and which is debited with the losses of the "realized depreciation," in whole or in part, of the property in respect to which the reserve is created. Such "credit balance" at any time constitutes, therefore, the "reserve."

Depreciation reserves are created and maintained for the purpose of offsetting the accrued depreciation which is taking place or has taken place in property in service and for providing a means by which units of property when retired may be replaced by new units equaling in cost those of the old units without addition to the fixed capital accounts. The fundamental purpose in accounting for depreciation and in establishing and maintaining depreciation reserves is, in the language of the Supreme Court in the Knoxville case, "so that at the end of any given term of years the original investment remains as it was at the beginning." A public utility, so the court said, "is entitled to see that from earnings the value of the property invested is kept unimpaired \* \* \*. It has not only the right \* \* \* but it is its duty to its bond and stock holders and \* \* \* its plain duty to the public." Similar expressions may be found in State statutes and in decisions of State commissions as quoted above.

The basis of property valuation for purposes of purchase and of rate making under the Federal Water Power Act is the "net investment," a quantity consisting of the original cost of the properties, less certain items, the chief of which represents that part of the accrued depreciation which has been reimbursed out of earnings in excess of a fair return. This basis of valuation fails unless reserves in the first instance represent the depreciation which has accrued and the loss in service value which has taken place, unless in fact they are sufficient to keep unimpaired the investment in the property. Furthermore, on no other basis can there be any assurance that all necessary renewals and replacements can be made. That Congress understood the term "depreciation" in the sense above stated, and that it intended that reserve should be established for the various units and classes of property in such manner as to equal the cost thereof at the time of replacement, is apparent from the following extracts from the debate upon the bill in the House of Representatives on September 4, 1918. Mr. Esch, a member of the special water power committee, and now member of the Interstate Commerce Commission, said:

"In any well-regulated plant there are depreciation reserves held for all the various units of the plant that wear out. The experts know the life of the different units. They know the life of a turbine wheel. They know the life of a generator, the life of a transformer, the life of a transmission line. They say, 'You must allow such a percentage of the cost price for depreciation purposes so that the given unit may be replaced when its useful life has ended.'" (Cong. Rec. of September 4, 1918, p. 9967.)

In the same connection Mr. Anderson, also a member of the committee, said:

"A net-investment plan, \* \* \* provides for the payment of actual legitimate cost less depreciation and less amounts which have accumulated in amortization. For instance, suppose you have structures on a dam site costing \$50,000. Immediately upon beginning the construction of those structures a depreciation fund is set up to take care of the annual depreciation of the property. The depreciation is calculated upon a basis sufficient at the end of the life of the structure to replace it. But suppose at the end of the period a sufficient amount has not been accumulated? In that event the difference is made up from operating revenue, not from capital. So that in that event even the capital would not be increased by the difference between the amount which you had in the depreciation funds and the value of the property at the end of its life." (Cong. Rec., September 4, 1918, p. 9957.)

In my opinion, construing the act as a whole and with reference to statutes *in pari materia*, the primary purpose of accounting for depreciation under the Federal Water Power Act is that reserves may be established and maintained sufficient for offsetting the reduction in service value due to accruing depreciation, from whatever cause, and for maintaining the original investment unimpaired, and adequate for renewing or replacing, so far as respects their original cost, units of equipment or of structures when their useful lives expire. I am also of the opinion that the act requires an accounting for depreciation substantially as set forth in the existing regulations of the Commission, and that such regulations are not inconsistent with the act, but, on the contrary, are necessary and proper for the purpose of carrying out the provisions of the act.

Representatives of the National Electric Light Association proposed at the hearing of November 21, 1921, the following definition of depreciation:

"'Depreciation' means the loss resulting from renewals and replacements. In other words, *the cost or expense of renewals and replacements.*" (Record of hearings, p. 71.)

If this definition is correct there is no depreciation in physical property, regardless of its condition, unless and until it is renewed or replaced. This view was, in fact, maintained at the hearing, where it was asserted:

"Almost every statement made by the proponents of the so-called theoretical depreciation based upon life tables is that machinery, apparatus, devices, etc., become exhausted through use; that a point is reached in their life when they become economically unrepairable. I take issue with such statement \* \* \*. No conclusion that such property efficiently maintained and operated *suffers any impairment of its service value due to use* can be justified from the facts of the business." (Record of hearings, pp. 62 and 63.)

\* \* \* \* \*

"No cost should be set up and *no reserve should be created* on account of apparatus or devices while they are still in useful service." (Record of hearings, p. 66.)

\* \* \* \* \*

"The unit withdrawn has then and there, and *at no time before*, diminished in value to the extent of such loss." (Record of hearings, p. 46.)

The definition of "depreciation" as proposed and the assertion that depreciation does not exist until property is retired or replaced, or at least so long as it is maintained in operating efficiency, was supported by no evidence, is contrary to the opinion of every recognized authority, and is in conflict with the practices and decisions of every public regulating body as instanced by the laws, rules, and decisions from which quotations have heretofore been made.



These very arguments were presented to the Interstate Commerce Commission *in re* Texas Midland Valuation, *supra*, and to the New York Public Service Commission *in re* Long Island Lighting Co., *supra*, and in both cases were emphatically rejected.

Representatives of the National Electric Light Association also proposed the following substitute for the first four sections of Regulation 16:

"The licensee shall establish and maintain an account entitled '*Depreciation Reserves*' to which shall be credited from time to time in excess of and in addition to its ordinary charges to its operating expense accounts for repairs and maintenance, *such sums as are provided by the licensee* for making all renewals and replacements necessary to maintain the project works in a condition adequate for the purpose of navigation and for the efficient operation of said works for the development and transmission of power." (Record of hearings, p. 49.)

It will be observed that the sole purpose for which reserves may be required under the proposed substitute is for renewals and replacements. There is no requirement and no intention to account for the actual depreciation which has accrued on the property in service, no proposal to maintain the investment unimpaired "so that at the end of any given term of years the original investment remains as it was at the beginning," and therefore no provision for effectuating the purposes of the act with respect to net investment. While it is proposed to maintain an account entitled "Depreciation Reserves," there is, in fact, no requirement that there shall be any reserve at all. The matter is left wholly to the option of the licensee. Even if in any year the credits to the account should exceed the debits, and a certain amount of reserve thereby be temporarily established, such reserve is in no sense a "depreciation reserve" since it has no dependence upon and no relation to the depreciation which has actually accrued in the property in service. It is at the best merely a "replacement reserve."

In view of the above I am clearly of opinion that the definition of depreciation presented by the representatives of the National Electric Light Association and their proposals with respect to accounting therefor are not in conformity with the act, and, if adopted, would not make it possible to carry out the provisions of the act. While, by the terms of the act, the authority of the Commission is not specifically limited and may therefore be exercised within the limits of reason and of sound practice, I am clearly of opinion, for the reasons stated above, that the Commission is without authority to adopt the definition of depreciation as presented, or to amend Regulation 16 in the manner proposed by the representatives of the National Electric Light Association.

In view of my conclusions as to the meaning of the word "depreciation" as used in the Federal Water Power Act and as to the purpose in accounting for depreciation, and in the creation and maintenance of depreciation reserves under the act, the several questions are answered as follows:

Question 1 is answered by stating that the authority of the Commission to prescribe rules of accounting for depreciation is not limited to the provisions of section 10, subsection (c), of the act for the purpose there expressed of providing for renewals and replacements, but that its authority extends to the issuance of any rule, regulation, or order not inconsistent with the act and which is necessary or proper for carrying out the provisions of the act. I am further of opinion, in view of the reasons heretofore given, that it is not only within the authority of the Commission but that it is also its duty to require accounting for depreciation by its licensees, either in conformity with regulations of its own or with those of State commissions, in substantial conformity with the principles herein stated.

Question 2 is answered by stating that the term "depreciation" is used in the act in the sense of the exhaustion of capacity for service, or the current lessening in service value, due to the several causes set forth in the definition contained in Regulation 16 as quoted above; that the words "depreciation reserves" mean the credit balances of depreciation accounts created and maintained for the purposes contemplated by the act; that the purpose or purposes for which such reserves are required by the act to be established and maintained are that there shall be available out of earnings assets or credits sufficient for offsetting the reduction in service value due to accruing depreciation, from whatever cause, and adequate for renewing or replacing, so far as respects their original cost, units of equipment or of structures when their useful lives expire, in order that, as stated by the Supreme Court in the Knoxville case, "at the end of any given term of years the original investment remains as it was in the beginning." In view of the fact that only by the creation and maintenance of reserves in accordance with the principles stated above would it be practicable to give effect to the net investment as a basis of rate making and of recapture at the end of the license period, as contemplated by the act, or to give assurance that all necessary renewals and replacements can be made when needed, I am clearly of the opinion that the rules for accounting for depreciation as contained in Regulation 16 are consistent with the act and with other legislation of Congress and are necessary and proper for the purpose of carrying out the provisions of the act.

Question 3 is answered by stating that the definition of "depreciation," and the system and methods of accounting, as proposed by representatives of the National Electric Light Association, are not consistent with the act, and if adopted would make it impracticable to carry out the purposes thereof.

Approved by the Commission, July 26, 1922.

### ACCOUNTS AND REPORTS.

It is not within the discretion of the Federal Power Commission to omit to prescribe the system of accounts and reports specified in section 4, subsection (d), of the Federal Water Power Act; in so far as applicable, the "classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission," is to be promulgated as a part of such system and it is not within the authority of the Federal Power Commission to waive the same; and the tentative draft of a system of accounting recommended by a committee of the National Association of Railway and Utilities Commissioners is inconsistent with these requirements and can not legally be adopted *in toto* by the Federal Power Commission in lieu of such requirements.

Chief Counsel to the Executive Secretary, May 25, 1922.

*Subject:* Accounting system for licensees under the Federal Water Power Act.

In your memorandum of May 4, 1922, you request an opinion on certain questions arising out of the claims of the representatives of the National Electric Light Association and others at the hearing before the Federal Power Commission on November 21, 1921, which claims, briefly stated, are:

(a) That the provisions of section 4, subsection (f), of the Federal Water Power Act, which *authorizes and empowers* the Federal Power Commission "to prescribe rules and regulations for the establishment of a system of accounts and for the maintenance thereof by licensees," and to require the submission of certain specified reports and statements, leave these matters wholly to the discretion of the Commission to act or not to act as it sees fit;

(b) That the tentative system of accounts proposed by a committee of the National Association of Railway and Utilities Commissioners is in full conformity with the terms of the act; and

(c) That it is within the discretion of the Commission to adopt that system *in toto* if it so desires.

The questions which you desire answered are as follows:

"(1) Whether, under the provisions of section 4, subsection (f), of the act, it is within the discretion of the Commission to prescribe or not to prescribe a system of accounts, or to require or not to require the submission of reports and statements as therein specified?"

"(2) What is the limitation placed upon the Commission in prescribing 'rules and regulations for the establishment of a system of accounts and for the maintenance thereof by licensees' by the provision contained in the definition of 'net investment' in section 3 of the act, namely: 'Said classification of investment of the Interstate Commerce Commission shall, in so far as applicable, be published and promulgated as a part of the rules and regulations of the Commission'?"

"(3) What would be the effect, if any, of said provision, or other provisions of the act, upon the authority of the Commission to adopt *in toto* the system of accounting recommended by a committee of the National Association of Railway and Utilities Commissioners?"

Section 4, subsection (f), of the Federal Water Power Act provides:

"SEC. 4. That the Commission is hereby authorized and empowered—

\* \* \* \* \*

"(f) To prescribe rules and regulations for the establishment of a system of accounts and for the maintenance thereof by licensees hereunder; to examine all books and accounts of such licensees at any time; to require them to submit at such time or times as the Commission may require statements and reports, including full information as to assets and liabilities, capitalization, net investment and reduction thereof, gross receipts, interest due and paid, depreciation and other reserves, cost of project, cost of maintenance and operation of the project, cost of renewals and replacements of the project works, and as to depreciation of the project works and as to production, transmission, use, and sale of power; also to require any licensee to make adequate provision for currently determining said costs and other facts. All such statements and reports shall be made upon oath, unless otherwise specified, and in such form and on such blanks as the Commission may require. Any person who, for the purpose of deceiving, makes or causes to be made any false entry in the books or the accounts of such licensee, and any person who, for the purpose of deceiving, makes or causes to be made any false statement or report in response to a request or order or direction from the Commission for the statements and report herein referred to shall, upon conviction, be fined not more than \$2,000 or imprisoned not more than five years, or both."

This provision is in permissive words but it does not follow from the use of such words that the Commission is vested with discretion to exercise or not to exercise the powers so conferred. It is well settled that permissive words in a statute conferring powers on a public officer are to be construed as requiring the exercise of the powers, where the enactment imposes a public duty or makes provision for the benefit of individuals whose rights can not be effectuated without the exercise of the powers. See *Minor v. Mechanics Bank* (1 Peters 46); *Supervisors v. United States* (4 Wall. 435), and cases cited; *Fowler v. Perkins* (77 Ill. 271); *Kansas Pacific Railroad Co. v. Reynolds* (8 Kans. 628); *People v. Commissioners of Buffalo County* (4 Nebr. 150). An act of Congress

authorizing the Secretary of Agriculture to make rules and regulations to prevent the transportation of infected cattle, etc., was held by Attorney General Olney to impose a duty under the general rule that "permissive words in a statute are peremptory when used to clothe a public officer with power to do an act which concerns the public interest." (21 Opin. Atty. Gen. 167, citing *Reg. v. Tithe Commissioners*, 14 Q. B. 459; 68 E. C. L. 459.) See Henry's motion (15 Ct. Cls. 166), where the court said: "Where a statute directs the doing of a thing for the sake of justice or the public good the word *may* is the same as the word *shall*, *Res. v. Barlow* (2 Salk. 609); and when a statute confers authority to do a judicial act in a prescribed case it is imperative on the court to exercise the authority when the case arises." See also *United States v. Thoman* (156 U. S. 353, 359), where the court, speaking through Mr. Justice White, said:

"It is familiar doctrine that where a statute confers a power to be exercised for the benefit of the public or of a private person, the word 'may' is often treated as imposing a duty rather than conferring a discretion. (*Mason v. Fearson*, 9 How. 248; *Washington v. Pratt*, 8 Wheat. 681; *Supervisors v. United States*, 4 Wall. 485.) This rule of construction is, however, by no means invariable. Its application depends on the context of the statute and on whether it is fairly to be presumed that it was the intention of the legislature to confer a discretionary power or to impose an imperative duty. (*Minor v. Mechanics' Bank*, 1 Pet. 46; *Binney v. Chesapeake & Ohio Canal Co.*, 8 Pet. 201; *Thompson v. Carroll's Lessee*, 22 How. 422.) In *Minor v. Mechanics' Bank*, Mr. Justice Story, delivering the opinion of the court, said (p. 63): 'The argument of the defendants is that "may" in this section means "must"; and reliance is placed upon a well-known rule, in the construction of public statutes, where the word "may" is often construed as imperative. Without question such a construction is proper in all cases where the legislature means to impose a positive and absolute duty, and not merely to give a discretionary power. But no general rule can be laid down upon this subject further than that that exposition ought to be adopted in this, as in other cases which carries into effect the true intent and object of the legislature in the enactment. The ordinary meaning of the language must be presumed to be intended unless it would manifestly defeat the object of the provisions.'"

It is clear that the provision under consideration imposes on the Commission a public duty, so that under the principle here stated the provision should be construed as directing or requiring the Commission to establish a uniform system of accounts for licensees, if said construction will carry into effect the true intent and object of Congress in conferring the authority. That it will do so is evident from the entire section, construed in connection with other parts of the statute conferring powers on the Commission the exercise of which requires a system of accounting, and from the discussions attending the passage of the act through the House of Representatives.

In support of these views, I will consider at some length the bearing on the intent of Congress in the matter under consideration of (A) *Other Provisions of the act*, and (B) *Debates in Congress*.

#### (A) OTHER PROVISIONS OF THE ACT.

##### COST OF PROJECT.

Section 4, subsection (a), of the act, provides that:

"In order to aid the Commission in determining the net investment of a licensee in any project, the licensee shall, upon oath, within a reasonable period of time to be fixed by the Commission, after the construction of the original project or any addition thereto or betterment thereof, file with the Commission,

in such detail as the Commission may require, a statement in duplicate showing the actual legitimate cost of construction of such project, addition, or betterment, and the price paid for water rights, rights of way, lands, or interest in lands. The Commission shall deposit one of said statements with the Secretary of the Treasury. The licensee shall grant to the Commission or to its duly authorized agent or agents, at all reasonable times, free access to such project, addition, or betterment, and to all maps, profiles, contracts, reports of engineers, accounts, books, records, and all other papers and documents relating thereto."

By this provision the Commission is charged with the duty of determining the net investment of licensees in the several projects, and licensees are required to furnish detailed information concerning the several items which enter into original cost of the project and cost of additions and betterments. These items furnish the fundamental factors of net investment, and these factors, as well as those subsequently determined as possible deductions from cost, must be systematically accounted for if the information is to be reliable and if there is to be uniformity of treatment of licensees.

#### NET INVESTMENT.

Section 3 of the act defines net investment as meaning the actual legitimate original cost of the project, plus similar costs of additions thereto and betterments thereof, minus certain items to the extent that such items have been accumulated during the period of the license from earnings in excess of a fair return on the investment. These items are (a) unappropriated surplus, (b) aggregate credit balances of current depreciation accounts, and (c) aggregate appropriations of surplus or income held in amortization, sinking fund, or similar reserves, or expended for additions or betterments, or used for the purposes for which such reserves were created. It is specifically provided that the term "cost" shall include, in so far as applicable, the elements thereof prescribed in the "classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission," and that "said classification of investment of the Interstate Commerce Commission shall in so far as applicable be published and promulgated as a part of the rules and regulations of the Commission."

The definition of "net investment" evidently looks forward from the original, legitimate cost as determined in accordance with the Interstate Commerce Commission's classification to a continued accounting for additions and betterments, for depreciation and other reserves, and for earnings, expenses, net return and surplus. The net totals of these several items, upon which the determination of net investment depends, can be ascertained only by the systematic current entry of the individual items in books of accounts; and the net investment of different licensees can be determined with consistency and uniformity only if uniform accounting principles and practices are followed; that is, only if the same accounting methods are employed by all. Not only is an accounting system necessary to give effect to the net investment, but its very definition provides that the classification of the Interstate Commerce Commission shall, in so far as applicable, be adopted.

#### ANNUAL CHARGES—EXCESSIVE PROFITS.

Section 10, subsection (e), of the act, requires a licensee to pay to the United States reasonable annual charges, including, *inter alia*, charges "for expropriation to the Government of excessive profits until the respective

States shall make provision for preventing excessive profits or for the expropriation thereof to themselves, or until the period of amortization \* \* \* is reached"; and further provides that "charges for the expropriation of excessive profits may be adjusted from time to time by the Commission as conditions may require."

It is plain that any intelligent or effective administration of this paragraph with the purpose of preventing or expropriating the excessive profits must require current accounting of net investment and the amount earned thereon from operations. It demands a continuing supervision to determine each year the amount invested on which the licensee is entitled to earn profits, what profits are made, and to what extent, if any, they are excessive.

#### AMORTIZATION RESERVES.

Section 10, subsection (d), of the act, provides:

"That after the first 20 years of operation out of surplus earned thereafter, if any, accumulated in excess of a specified reasonable rate of return upon the actual, legitimate investment of a licensee in any project or projects under license the licensee shall establish and maintain amortization reserves, which reserves shall, in the discretion of the Commission, be held until the termination of the license or be applied from time to time in reduction of the net investment. Such specified rate of return and the proportion of such surplus earnings to be paid into and held in such reserves shall be set forth in the license."

The administration of this provision is made practicable only by such systematic accounting by licensees as will enable the Commission to ascertain currently those factors with respect to revenues and expenses which determine whether the earnings have reached a point requiring some part to be diverted to amortization reserves; and that this provision of the law can bear uniformly upon all licensees only if there is uniformity in accounting practice with respect thereto.

#### REGULATION OF RATES, SERVICE, AND SECURITIES.

Section 19 of the act empowers the Commission to regulate and control the rates, service, and securities of any licensee engaged in public service in a State which has not empowered a commission or other agency, or agencies, to exercise such regulation and control, and section 20 confers similar powers upon the Commission whenever the power developed in any project under license enters into interstate or foreign commerce, and the States concerned either have not the authority to act in the matter or can not agree.

To what extent it may be necessary for the Commission to exercise the powers of regulation conferred by sections 19 and 20 may be a matter of doubt. There can be no doubt, however, that the exercise of these powers would be wholly impracticable in absence of a system of accounting so devised as currently to record in permanent form information essential to such regulation.

#### GOVERNMENT USE IN TIME OF WAR.

Section 16 of the act empowers the President, when, in his opinion, the safety of the United States demands it, to take over the project for the manufacture of nitrates, explosives, or munitions of war, or for any other purpose involving the safety of the United States, and to operate the same "for such length of time as may appear to the President to be necessary to accomplish said purposes." It provides for just and fair compensation to be fixed by the Com-

mission upon the basis of a reasonable profit in time of peace, and the cost of restoring said property to as good condition as existed at the time of taking over thereof, less the reasonable value of any improvements that may be made thereto by the United States and which are valuable and serviceable to the licensee.

It is manifest that the determination of the rights of the licensee at the close of the period, in the manner provided by the statute, requires that accounts shall have been kept, showing the items which enter into the net earnings of the project, in order that the Commission may determine the amount which shall be paid to the licensee "upon the basis of a reasonable profit in time of peace," etc.

#### RECAPTURE.

Section 14 gives the United States the right at the expiration of the license period to take over the project for operation by the United States upon paying "the net investment of the licensee in the project or projects taken, not to exceed the fair value of the property taken, plus such reasonable damages, if any, to property of the licensee valuable, serviceable, and dependent as above set forth but not taken, as may be caused by the severance therefrom of property taken." Under section 15 licenses may be transferred to another licensee upon payment of the same amount the United States would be required to pay under section 14.

The price to be paid for the properties if taken over at the end of the license period is to be determined by a rule which takes as a base the cost of the project property then in service, deducts therefrom certain items which have been provided for or accumulated out of the earnings of the project *in excess of a fair return*, and adds thereto severance damages, if any. The items to be deducted are:

- (a) Unappropriated surplus.
- (b) Aggregate credit balances of current depreciation accounts.
- (c) Aggregate appropriations of surplus or income, held in amortization, sinking fund or similar reserves, or expended for additions or betterments, or used for the purposes for which such reserves were created.

In order to apply such a rule it is apparent that the Commission must know, among other things:

- (1) The cost of the project property in service at the end of the license period,
- (2) The *aggregate* expenditures of income or surplus during the license period upon extensions and betterments,
- (3) The *accumulated* net earnings of the project during the license period,
- (4) The *accumulated* "fair return" during the license period on the investment in the project,
- (5) The amount of the several reserves, if any, at the end of the license period *applicable to the project*, and
- (6) The amount which may have been in the several reserves at any time during the license period *applicable to the project* but which was "used for the purposes for which such reserves were created."

The determination of the facts enumerated above will involve the application of a complete accounting system. This would be true if project property only were involved, but in most cases the situation will be complicated by the fact that the licensee will operate nonproject property in connection with the project. As defined in the act, the *project* property for which a license may be issued includes only such property as dams, reservoirs, waterways, power plants and equipment, and transmission lines. The *distribution* system, which

is essential to all public utility plants, will not be included in the license; and in many cases licensees will own and operate in connection with project property steam generating plants and other hydroelectric plants not under license.

So far as the cost of projects is concerned the act provides that the Commission shall follow the principles set forth in the Interstate Commerce Commission's classification. This classification not only defines in great detail the elements that are to be included in stating the *original* cost of property, but it includes as well the rules that shall be followed in accounting for property retired, for additions and betterments made from time to time, and provides also for the accounting as between investment and operating expenses of expenditures made in demolishing or dismantling retired property, restoring the grounds and cleaning up the premises after such dismantling, the conversion of property from one class to another, and other similar matters involving the construction, retirement, and conversion of property. As to the *cost* of project property, therefore, it is only necessary that the Commission adopt and apply the principles of the accounting classification of the Interstate Commerce Commission.

As to the remaining items which must be taken into consideration at the time of recapture of the project, no definite rules of procedure are laid down in the act, but if the law is to be intelligently administered the Commission must prescribe rules for determining the earnings and expenses of licensed projects, the creation of the several reserve and other accounts referred to, and all of the details of accounting in connection therewith.

The act as a whole relates chiefly to *licensed projects*, but the accounting system which, under the provisions of section 4, subsection (f), of the act, the Commission is empowered to prescribe applied not merely to licensed projects but to *licensees*, in so far, at least, as the operations of the licensee may be connected with the licensed project. This appears to be necessary by reason of the fact already mentioned, that in many cases nonproject property will be operated in connection with project property and it will be necessary to make an allocation between project and nonproject property of the earnings, expenses, and other items affecting operations. It is anticipated that the matter of the allocation of the debit and credit items in the determination of the "net earnings" of projects will be one of the most difficult accounting questions with which the Commission will be confronted, and unless definite rules are prescribed for the accounting for all items of operating and nonoperating income it will be exceedingly difficult to determine with any degree of accuracy what are the proper net earnings of the project for any given period.

From the preceding review it is apparent that the observance by licensees of systematic and uniform accounting practices is indispensable for carrying out the general purposes of the act, as well as for putting into effect many of its specific provisions.

The majority of licensees under the act will be public-service corporations, subject to regulation by State authority and required by such authority to maintain accounting systems. Some licensees, however, will operate in States which have no accounting system, and some will not be engaged in public service at all and therefore will not be subject to any State authority. For these last-named licensees the Commission is the only agency with power to prescribe a system of accounts. Between the systems which have been prescribed by the several States there is lack of uniformity in many respects. Unless, therefore, in these States the Commission prescribes its own system to be applicable to licensees to such an extent at least as will provide for systematic and uniform practices and records with respect to these matters, which are made specific requirements of the act, there will be lack of essential information for the ad-



ministration of the act and lack of uniformity in the application to licensees of those provisions of the act above cited. I am clearly of the opinion, therefore, that it is not only within the authority of the Commission, but that it is also its public duty, to prescribe a system of accounts to be made applicable in full to all licensees not subject to State requirements in accounting matters, and to be made applicable to all other licensees to the extent that the systems prescribed by the several States do not supply information of the extent or character required for the effective administration of the act.

#### (B) DEBATES IN CONGRESS.

If there could be any doubt as to the intent of Congress in conferring authority on the Commission to establish a system of accounts it is resolved by the forceful statements of Members of the House in debates which preceded the enactment of the statute. The Federal Water Power Act is the enactment of House bill 3184 of the Sixty-sixth Congress. This bill was a reintroduction, with few substantial changes, of Senate bill 1419, as that bill had passed the House in the preceding Congress. Mr. Ferris, of Oklahoma, in the minority report of the House committee, opposed the proposal to recapture on the basis of net investment, favoring instead the basis of fair value as of the date of recapture, and again, at the close of the debate, proposed an amendment striking out the provisions with respect to net investment and substituting as a basis for recapture, fair value not to exceed cost (vol. 56, Cong. Rec., p. 10051). The greater part of the discussion in the Committee of the Whole had reference to this amendment and collateral matters. Among the latter, particular attention was given to those provisions of the bill relating to accounting.

Mr. Anderson (id., p. 9282), in outlining the purposes of the bill, said:

"It is claimed that the quickest and the largest development can be secured by turning over these powers to unrestricted private ownership. However much truth they may be in this claim, it is unthinkable that this last governmentally owned natural resource should now be turned over to unrestricted private exploitation.

"At the other extreme are those who would have all the water-power sites of the country developed, owned, and operated by the Federal Government. Aside from the advantages or the disadvantages which might be urged against Government operation of water powers, as well as with reference to other public utilities, it is altogether unlikely that the Government will find itself in position either now or in the period immediately following the war to undertake as a governmental activity the development and operation of water-power plants.

"The present bill represents a scheme of development between these two extremes, and contemplates development by private capital under leases of 50 years, which will reserve to the Government the right to supervision of operation and rates and provide for the recapture of the property on the expiration of the license period.

"Development by private capital under these conditions is possible only if the terms of the license offer reasonable certainty that the developer will be permitted to earn a reasonable rate upon investment and the assurance that if the Government takes over the property at the end of the period under the right of recapture that the actual original and new capital invested will be returned to the investor.

"The committee has endeavored in this bill to meet both of these requirements and at the same time preserve to the Government and to the people every right of regulation, control, and recapture.

"Again, it is claimed by those who insist upon the policy of unrestricted private development that the regulation of rates by State and Federal commissions insures to the public every right to which it is entitled, and which is at the same time consistent with the idea of private development. With this claim I do not agree.

"In fixing the rates to be charged by hydroelectric concerns the same difficulties are encountered as have been met in the attempts during the war to fix the price of commodities. The hydroelectric resources of a region are seldom sufficient to supply the power requirements of the community situated within the radius of efficient transmission. In other words, hydroelectric power is ordinarily sold in competition with steam power. High-cost power concerns are competing in the same community with low-cost power concerns. To illustrate, a rate which would permit a high-cost concern to live would return a very large profit to a low-cost concern, while a rate which would reduce the profits of a low-cost concern to a reasonable return would put a high-cost concern or a steam concern out of business.

"These facts make it impossible to lay down a uniform rule as a matter of legislation fixing a basis of either rates or profits and illustrates the inefficiency and ineffectiveness of rate regulation as a means of curtailing profit.

"In order to meet this situation the committee has provided in this bill that the license may contain provisions requiring the use of the surplus earnings in excess of the amount set aside for depreciation, renewals, and replacements, and a reasonable net return in amortization or in rebating charges to consumers. The bill in these respects is sufficiently flexible to meet any situation which may arise.

"I come now to the discussion of that feature of the bill around which most of the controversy centers. This is the basis of recapture, which determines the amount which must be paid by the Government or a new licensee in case the property is taken over or leased to a new licensee at the end of the license period.

"The basis heretofore adopted has always been unsatisfactory because of its indefiniteness both at the time of issuing the license and at its expiration. The committee has adopted a basis of recapture which we think is scientific and so susceptible of definite interpretation as to be in the interest of both the investor and the Government. This is the so-called 'net investment' plan.

"This plan contemplates the return to the investor in case of recapture of the actual original cost of the project less credit balances accrued in depreciation account, unappropriated surplus, and the amount set aside for amortization.

"In order to properly safeguard the interests of the Government in determining the elements entering into the various cost factors the bill provides that the Commission may require the licensee to keep a system of accounts in accordance with the direction of the Commission; that the Commission shall have the right to examine books of the licensee at all times; to require reports and statements of assets, liabilities, capitalization, cost of project, cost of operation, and the production, transmission, use, and sale of power. The Commission is also authorized to hold hearings and take testimony.

"In addition, the licensee is required by the terms of the license to maintain the project works in a condition of repair adequate for the efficient operation of the same, to make all necessary renewals and replacements, to maintain adequate depreciation reserves, and to amortize the cost of the project in the event he earns a return in excess of a specified return stated in the license. The licensee is further required to operate and maintain the plant at the full capacity of the available market for the full term of the lease.

"The advantages of this plan lie principally in the facility which it gives for governmental control and for the scientific ascertainment of the actual cost of the plant as a basis of recapture."

Mr. Parker, discussing (id. 9284) the relation of the accounting system to the amortization fund and to the recapture price, said:

"I commend also to the House the new provisions to which, to my astonishment, objection has been made. There are two. One is a provision for keeping strict accounts of the real net investment made in the project so that all will know from time to time what is being done. The second one is a provision which says that every contract shall contain an arrangement by which, if there be surplus earnings above a fair return on that investment, those surplus earnings shall be applied either in the paying off of the amortization of this investment or in the reduction of rates. \* \* \*

"We are going here to do something that has been tried. The accounting system of the railroads is contained not merely in the little book referred to, but other books to which that one refers, in which it is provided that if a railroad build a new station the whole cost of the original station is deducted from the new cost of the other. This is only an example; these books contain hundreds of pages of rulings showing how the accounts shall be managed. It is therefore impossible under those circumstances for a man to take a license and then to charge everything from year to year, whether it be the repair of a dam, or whatever it may be, to his capital account, so as to increase apparent profits, and then say, 'I have made tremendous profits, and those tremendous profits fix the value of my plant and you have got to pay them to me.' The bill establishes a system of accounting by which the United States will find out what the real profits were after charging what ought to go to repairs and maintenance to current account, and not charge them to the capital account. It makes for honesty and straightforwardness, and how anyone can object to it is hard to see. It prevents the mere kiting of a project, as has been done so often with railroads, which have paid dividends because they charge to capital account expenses which ought to have gone to their income. This system is devised in order to prevent that.

"Now, by the second clause, to which I have referred, it is the duty of the Commission and will be the duty of everyone else to look after it from year to year, because every year there is an investigation to find out what the earnings have been. If they are less than a fair return upon the cost of the investment, they will go to the licensee. If they are more than a fair return—and what will be a fair return will be expressed in the lease—then they may be applied, and shall be applied under the contract, either to the reduction of the original cost and of the amount that the Government shall pay on recapture, or else they will be applied to a reduction of rates so that the public will get the benefit. \* \* \*

"I believe these provisions to be new. I believe them to be just. I believe they can be worked out in such a way as to make liberal contracts which will be liberal to the person who takes the license, and at the same time so carried that he shall not make exorbitant, monopolistic profits, but that the whole enterprise shall be for the good of the public.

"I commend the bill to the House for that. I commend it also on the very grounds objected to as to recapture. If there are no such provisions and no

*such accounts, and licensees may keep their accounts as they please, you come to the end of the term, and the owner says, 'I have spent so much in the investment account,' and nobody can properly revise it after 50 years. This clause provides that the investment account shall be carefully scanned every year for the purpose of this amortization process and reduction of rates, and that investment accounts shall be looked after yearly so that no such claim shall be made as to the value of the property at the end of the term. It provides for careful scrutiny of the property from time to time and from year to year, so that at the end of the term the Government can fairly pay to the party the fair value and cost of his property, not on the verdict of a jury, on the mere allegation that 'we have made so much money and put in so much money,' and with accounts that nobody can scan, unless gone over by experts in the past 50 years, but with adjusted, settled accounts, settled from year to year, so as to show always what is fair between the people and the persons who have taken licenses."*

Mr. Sinnott, in the same debate, in discussing the difference between "fair value" and "net investment" with its accounting provisions as a basis of recapture and the definitions of the latter, said (id. 9299) :

"Secretary Houston was right when he said 'fair value, not to exceed actual cost, is at best indefinite;' that 'the difference is one of definiteness and clearness.'

"Are you going to estimate fair value by original cost to date, less depreciation, or by reproduction cost new, less depreciation? It has been done both ways. Also market value as a going concern has been considered.

\* \* \* \* \*

"Fair value also furnishes the measure for rate regulations. Do you want to rehearse these questions every time there is a contest about rate regulation? Secretary Houston well said, 'You will have to debate each time what was meant by fair value and haggle over it.'

\* \* \* \* \*

"Do we want such complications when we take over these plants? I certainly prefer the 'net investment' plan, *affording daily data and information for rate regulation, and immediate information of the net investment at the expiration of the license period.*

\* \* \* \* \*

"A superficial acceptance of the meaning of the term 'net investment' may lead some to think that every dollar invested in the property is to be returned at the end of the license period, and that obsolescence and depreciation are to be ignored in the recapture price. This is not the case. Especial consideration is given to these subjects in section 10, paragraph C, where the licensee is required to make necessary renewals and replacements for the obsolescence, he is required to maintain depreciation reserves for that purpose. All of this is under the direct control and authority of the Commission.

"At the end of the term any sum in the depreciation reserve in excess of a fair return will be deducted from the net investment. There also will be deducted from the net investment unappropriated surplus, amortization reserves, expenditures for additions or betterments, in so far as they are accumulated from earnings in excess of a fair return. *All this will be a matter of continuous current record under the direction and supervision of the commission provided for in this bill.*

"'Fair value' takes no account of these deductions, but at the end of the period deducts depreciation, to be ascertained, doubtless at the end of a long controversy or litigation, involving the vexatious questions of cost to date,

less depreciation, and the further question of the legal interpretation of 'fair value' as defined and limited. Also there will enter into the 'fair value' determination a dispute as to the proper assignment of various expenditures, whether to operating expenses or capital account, *all matters of current record and adjustment under net investment, properly assigned and explained in the classification account of Interstate Commerce Commission.* \* \* \*

"Surely the certainty and definiteness accompanying 'net investment' will result in cheaper interest in financing any project to be reflected in cheaper rates to consumer." \* \* \*

Mr. Esch on September 4 went thoroughly into the proposed scheme for determining net investment (id., p. 9956-9958). He favored the plan of the committee because "we \* \* \* will have a basis for rate making, so that any time, any day or month or year, the books of the company will show the actual net investment and also the basis upon which the rates can be made." He further said:

"What does this net investment do? What does it mean? In the first place, in order to determine what we mean by 'the actual, original, legitimate cost,' we refer to the classification of investment for road and equipment adopted by the Interstate Commerce Commission in 1914. Now we have a basis. We have something that is already in force, something that is already being applied in the valuation of our railroads at this very day. Did you see the decision of the Interstate Commerce Commission the other day in the Texas Midland case? That decision discussed various phases of valuation based upon the classification we have made a part of this bill.

"Now, if we have got the classification, if we have got the unit of measurement as already fixed by law, as already administered by the Interstate Commerce Commission, the greatest body of valuation experts we have, why can we not apply that same definition in the matter of valuation of water powers for recapture purposes? [Applause.] And we do that. We say:

"'Net investment,' in a project means the actual legitimate original cost thereof as defined and interpreted in the 'Classification of investment in road and equipment of steam roads,' issue of 1914, Interstate Commerce Commission."

"Notice how carefully we have used the words 'the actual legitimate original cost.' No cost is allowed here for joy rides or for expenses of getting out prospectuses and things of that kind. It is the actual legitimate original cost that binds this commission in determining the value at recapture. And then we say that it shall be according to this classification. Have you read that classification? If you have not, permit me to say that it carefully defines the elements of cost that shall be considered; the charges or deductions that shall be made. It gives the accounts for investment in the minutest detail. If I had time I would be glad to go over them. It even covers the matter of water powers, because water powers are now being developed in connection with transportation by rail. It shows how the cost can be allocated to the various parts of the water-power project, as to dams, as to power houses, as to generators, as to transmission lines, as to turbines, as to all the elements that we have to deal with in this bill. They are all covered in the minutest detail under this classification of 'net investment' and we import that into this bill because it is already the law.

"Net investment, moreover, embraces the original cost for the additions and betterments, the idea being that any honest additions and betterments should be charged to the capital account. But when all this is done we must make certain deductions or subtractions from the net investment when it comes to recapture.

"What are they? We must deduct any 'unappropriated surplus' that you may have in your treasury at the time of recapture.

"I admit that there may be not much of such funds in the treasury of a water-power company at the end of 50 years; but whatever there is must be deducted from the 'net investment' and by so much lessen the amount the Government would have to pay on recapture.

"We deduct what else? We deduct the 'aggregate credit balance of current depreciation accounts.' In any well-regulated plant there are depreciation reserves held for all the various units of the plant that wear out. The experts know the life of the different units. They know the life of a turbine wheel. They know the life of a generator, the life of a transformer, the life of a transmission line. They say: 'You must allow such a percentage of the cost price for depreciation purposes so that the given unit may be replaced when its useful life has ended.' But sometimes these units may far outlive their ordinary life or period of usefulness. Those credit balances, therefore, to the credit of those particular depreciation accounts shall be deducted from the net investment upon recapture.

"But that is not all of the deductions we make. We say, further, that 'aggregate appropriations of surplus of income held in amortization, sinking fund, or similar reserves, or expended for additions or betterments' shall be deducted from net investment. As business is now conducted amortization, sinking fund, or similar reserves are now created out of surplus or income. Such funds are created as a matter of safety and good business. If there is any money in these funds or reserves at the date of recapture, it, too, must be deducted from the 'net investment' thereby lessening the amount that the Government is to pay on recapture.

"We do not even allow the investor, the lessee, to add the cost of additions and betterments that have been paid for out of the excess surplus. Even that is deducted. But that is not all. We say to the licensee, 'You shall not add to your net investment anything that comes to you in the way of gifts or donations from individuals, a corporation, municipality, or State.' All that is deducted. When all these things are deducted, the balance will represent the 'net investment' which is payable on recapture.

\* \* \* \* \*

"I wish to say further, Mr. Chairman, that under the 'fair value' plan will anyone tell me what is meant by 'fair value?' Does anyone know? Nobody knows what 'fair value' means. The courts for 40 years have been trying to define what you mean by 'fair value.' And they use different terms—'fair value,' 'reasonable value,' 'market value,' and the gentleman from Oklahoma (Mr. Ferris) uses two or three different terms in the bill that he has fathered in previous Congresses. The Supreme Court tried to define it in the famous 'case of Smythe against Ames, decided by Justice Harlan 20 years ago, known as the Nebraska case, where the question came up as to what was the proper basis of valuation for fixing railroad rates, and the justice held that eight or nine different elements of valuation must be taken into consideration to determine the fair return on the fair value of the property, and the Supreme Court has repeatedly sought to define it ever since. It tried to do it in the San Diego water-power cases. It tried to do it in the famous Wilcox against the Consolidated Gas Co. case, and in the Minnesota rate cases. It has not been defined yet. We want to substitute for it 'net investment' as determined by the rules of the Interstate Commerce Commission. Determine it according to the elements of cost therein described.

"Gentlemen, a main reason why I favor this net-investment plan is because of the *certainty and the definiteness* of it. We will have at any time

a standard for the adjustment and fixing of rates which such licensee shall charge. We have not yet a standard of measurement for the fixing of the railroad rates of the United States. It was because of that reason in 1913 we passed the physical valuation act. When that physical valuation is completed the Commission will have a standard upon which it can fix the railroad rates of the country. By the net-investment principle here we, following the example of the Interstate Commerce Commission, will have a basis for rate making, *so that at any time, any day or month or year, the books of the company will show the actual net investment* and also the basis upon which the rates can be made. That is one of the greatest advantages in favor of the net-investment plan, and that alone would justify its adoption in this bill, because of the certainty of our standard."

On the same day (id. 9959) Mr. Parker, speaking of the definition of net investment and its relation to the classification of the Interstate Commerce Commission, said:

"No Congress could ever afford in managing great affairs to get rid of the teachings of experience that we have in the working of that Commission. We are dealing with many of the same subjects. We shall have to give the public the use of the water as we now give them transportation. The rates will have to be regulated, as in railroads, by the State, or by the United States in case of interstate rates. The foundation of all this will be first in the license and second in the system of accounts.

"It is surprising that anyone should wish to get rid of the system of accounts which are called net investment. These accounts are governed in railroads by regulations printed in the volumes I hold in my hand. Here is an index of the whole. The rules as to investment are shown in this pamphlet, from which an extract is made in the hearings, but it refers also to these other volumes as to operating revenues, operating expenses of the railroad, classification of income, profit and loss, and the general balance of the accounts. Another gives rules as to whom shall be regarded as employees and what sums can be fairly allowed, in what direction for employees. All these matters, which are of vital importance, are all connected together. *Those accounts, if we are to regulate rates and see that business is fairly conducted, must be at hand and made up from year to year. Without them nothing can be done in the way of securing continual good management, not to speak of recapture.* Recaptures are at the end of 50 years. Meanwhile the way these companies are to run depends on how they keep their accounts, subject to the approval of this Commission composed of three secretaries, and the work done by the Commission in going over the accounts and in fixing the rates and seeing how the companies do their business. Yet it is proposed here by the first amendment to throw away that whole system of accounts by striking out the provisions for ascertaining the net investment. It is proposed by a second amendment to get rid of the very valuable provision in the license that surplus earnings over a fair return and over what is needed for amortization or paying off the capital account may, under the terms of the license, be apportioned between the men who run the property for profit and in reduction of rates for the benefit of the public.

"It is thus proposed at the end of 50 years to leave the courts, in the adjustment of what shall be paid to the men who have been running that business, to a mere guess. Let us expand that thought for a moment. Give a licensee a water power and let him go ahead in his own way. It will be to his advantage to call everything investment, because when he puts money in a renewal, perhaps a dam that has broken out, he puts in a new dam and will

be tempted to charge the cost of both dams to capital account and thereby increase the apparent income to distribute to the stockholders in the way of profits. He enlarges his profits and enlarges his investment account at the same time, so that it will look as though those profits were only fair; and at the end of the time he will say, 'I have invested so many hundred millions of dollars, if you please, and have paid such a large rate of dividends that I am entitled to pay for the fair value of my property upon that basis.' That could easily be done. The system of net investment will act differently. It says, if the licensee put in a betterment, that the cost of the old thing that was taken out at present prices, if it were new, shall be deducted from the cost of what is put in its place. It says if the value of the property is running down from year to year that the licensee must keep a depreciation account. It says that items of expenditure which are intended for maintenance shall be charged to current expenses and not to investment of capital. It therefore states truly in those accounts, so that he that runs may read, exactly what has been expended for capital accounts and what has been expended for income accounts, and the real net balance, so that there will be a real foundation to ascertain actual cost even if the provision be substituted that is offered is desired by way of amendment for section 14, that on recapture there shall be paid only the fair value, not to exceed the actual cost. These accounts will tell what the actual, real, legitimate cost was, yet it is proposed to strike it out. It is unheard of that the provision for accounts shall be struck out."

Mr. Anderson again spoke (Id., p. 9966):

"Now, I want to refer just for a few moments to the intrinsic merits or demerits of the two propositions. *The fundamental and, I think, the most important advantage of the net-investment basis is that of certainty, and that certainty means a certainty not only at the end of the 50-year period but a certainty of the amount invested every day, every month, and every year during the entire period of the lease.* It means more than that. It means a certainty to the investor when he puts his money into the plant. As the gentleman from Wisconsin [Mr. Esch] has said, that certainty means a reduction in the interest rate to be charged upon the amount invested in the plant, and that reduction in the interest rate is itself again reflected in a reduction in the rates which will be charged to consumers. Every element of uncertainty injected into the basis of recapture will eventually be reflected in increased rates to the man who pays the bill.

\* \* \* \* \*

"The gentleman from Wisconsin [Mr. Esch] has suggested that another advantage in this provision of net investment is in rate making. It provides an absolute and determinable basis upon which rates may be based. We have had enough experience with railroad rate making, undertaken without any basis at all, to appreciate the necessity of beginning now, when we can enter upon the books every element of cost, to require the keeping of the accounts of these licensees in such a way that the Government may know at any moment just what amount the licensee has invested in the plant. That can not be possible under any other plan than the one proposed in this bill."

The House in Committee of the Whole, on a vote, rejected the amendment proposed by Mr. Ferris, and by this action retained the net investment and collateral accounting features of the bill.

The Members of the House from whose remarks in debate the above extracts are taken were all members of the special water power committee which prepared and reported out the bill. The discussion shows that the members participating therein clearly believed that they were dealing with the beginning



of a new industry, or at least new enterprises, which were to have a public character and to be kept free from private exploitation. They had experienced difficulties in regulating railroads and they were resolved as to the new industry to avoid the pitfalls into which they had fallen in dealing with the railroads. This was to be done by keeping close track of the cost of projects and of additions thereto and betterments thereof, and by requiring full accounting of all the operations of licensees. The system of accounts was the central idea of their plan without which it is doubtful if any legislation would have been adopted. I am clearly of the opinion that it was the intent of Congress that the Commission should prescribe and enforce a system of accounting for licensees for the purpose of currently determining in a systematic and uniform manner, and in accordance with the classification of the Interstate Commerce Commission, the factors necessary for ascertaining the net investment and the revenues, expenses, and earnings of licensees.

THE TENTATIVE DRAFT OF THE NATIONAL ASSOCIATION OF RAILWAY AND UTILITIES COMMISSIONERS.

It has been recommended that the Commission adopt for its purposes a tentative draft of a proposed accounting system or classification prepared by a committee of the National Association of Railway and Utilities Commissioners, and you inquire whether the Commission has authority so to do. The answer to your question depends upon the degree to which this tentative draft conforms, or fails to conform, to the general purposes and to the specific requirements of the Federal Water Power Act. A careful examination of the tentative draft indicates that it fails to meet the requirements of the Federal Water Power Act in several respects, and particularly in the following:

(1) It does not have incorporated therein and made a part thereof the "classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission," which, under the express provisions of section 3 of the act, this Commission is required to publish and promulgate, in so far as applicable, as a part of its rules and regulations.

While the classification of the Interstate Commerce Commission can not be adopted *in toto* as a classification for the purposes of the Federal Water Power Act, since it is intended for properties of a different character and is, therefore, not applicable as a whole, it is believed to be the intent of the act that the accounting principles of the Interstate Commerce Commission classification should be followed by this Commission in the preparation of its own classification; that the Interstate Commerce Commission classification should be printed and issued as a part of this Commission's rules and regulations; and that in case of conflict or dispute all applicable provisions of the Interstate Commerce Commission classification should be controlling. The mere fact, therefore, that the association draft as now existing does not similarly contain the Interstate Commerce Commission classification would not prevent the adoption by this Commission of the association draft if it conformed in substance and in principle to the Interstate Commerce Commission classification.

(2) It permits donations to be included in plant investment accounts. Section 3 of the Federal Water Power Act specifically provides that "the term 'cost' \* \* \* shall not include expenditures from funds obtained through donations by State, municipalities, individuals, or others."

(3) It does not conform to the classification of the Interstate Commerce Commission in its treatment of retirement and conversion of fixed capital.

(4) It contains no provision for the creation and maintenance of certain reserves and other accounts necessary to be considered in determining the "net investment" in a project, namely:

(a) Depreciation reserves, or "credit balances in current depreciation accounts";

(b) Amortization reserves, as specifically required by section 10, subsection (d), of the act; or

(c) Reserves for additions and betterments.

(5) The "retirement reserve" proposed in the National Association draft (account 251, p. 21), as a partial substitute for a "depreciation reserve" is intended to account only for such losses as are incident to important retirements of buildings, of large sections of continuous structures like electric line, or of definitely identifiable units of plant or equipment, and the object of the account is that the burden of such losses may be as nearly as is practicable equalized from year to year." Such a reserve, therefore, is clearly inadequate to carry out the provisions of the Federal Water Power Act which require the setting up of "depreciation reserves" ("current depreciation accounts"), the accounting for "depreciation of the project works," and the carrying of such accounts from the initiation of the project to the day when the Government may desire to ascertain the net investment for the purpose of making rates, of authorizing the issuance of securities, of taking over the project, of transferring the license to another licensee, or of carrying out any other purpose for which it is essential to know the net investment.

It is apparent, therefore, that the National Association's tentative draft of a system of accounts is inconsistent with the act and would not be a proper system for the purpose of carrying out the provisions of the act.

In the light of the foregoing discussion, the questions submitted are answered as follows:

*Answering question 1.* I am clearly of the opinion that it is not within the discretion of the Commission to prescribe or not to prescribe a system of accounts, or to require or not to require the submission of reports and statements, as specified in section 4, subsection (f), of the act. It is clear that both an accounting system and the submission of such reports are necessary, as stated above, to enable the Commission properly to perform the duties imposed by other provisions of the act, and that the system required is one which will enable the Commission, at any time, to determine the net investment in the project, and to secure such information with respect to revenues, expenses, and earnings as is necessary in the administration of the act. Where State commissions prescribe for public utilities such accounting systems as will show the facts required to be shown by the act, and necessary to the Commission in the performance of its duties, the Commission may permit the accounting to be in accordance with such system; otherwise, the system prescribed by the Commission must be followed.

*Answering question 2.* I am clearly of the opinion that the act requires the Commission to publish and promulgate as a part of the accounting system which it is required to prescribe the "classification of investment in road and equipment of steam roads, issue of 1914, Interstate Commerce Commission," in so far as the same is applicable to licensed projects and when not directly applicable, to follow the principles of said classification; and that it is not within the discretion of the Commission to waive this requirement. It is clear from the discussion in the House, as quoted above, that it was the intention of Congress to require an accounting system in conformity with said classification;

and I am of the opinion that the Commission can not legally adopt an accounting system in conflict with said classification.

*Answering question 3.* I am further of the opinion that the tentative draft of a system of accounting recommended by a committee of the National Association of Railway and Utilities Commissioners, by its inclusion of certain items not allowed under the act, by its exclusion of other items specifically required by the act or necessary in the administration thereof, and particularly by its failure either to incorporate or in essential respects to conform to the classification of the Interstate Commerce Commission, is inconsistent with the act and would not be a proper system for carrying out the provisions of the act; and that, therefore, the Commission can not legally adopt said system *in toto* as has been recommended.

Approved by the Commission, July 26, 1922.

## APPENDIX E.

*List of applications filed with the Federal Power Commission.*

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Date of application.				Project affects—			
				Preliminary permit.		License.		Public lands.	Indian reservations.	National game wa-va-esters.	
				Informal.	Formal.	Informal.	Formal.				
1	Dixie Power Co.	Ark.	White River	1920.	Oct. 20, 1920	1920.		x		x	
2	Sperry, C. W.	Idaho	Moyle River	June 23	June 24						
3	Washington Irrigation & Development Co.	Wash.	Columbia River	June 12	Sept. 2, 1920			x		x	
4	Speel River Project	Alaska	Speel River	do.	Jan. 6, 1921		Mar. 12, 1921				
5	Rocky Mountain Power Co.	Mont.	Flathead River	June 19	Nov. 27, 1920		do.	x	x	x	
6	Roanoke River Development Co.	Va.	Roanoke River	do.	Dec. 24, 1920		do.	x		x	
7	St. Lawrence Transmission Co.	N. Y.	St. Lawrence River	June 21	Dec. 2, 1920		do.	x		x	
8	Pitt River Power Co.	Calif.	Pitt River	do.	Feb. 5, 1921		do.				
9	Sound Power Co.	Wash.	Sultana River and Olney Creek	do.	do.		do.	x	x		
10	Straits Power Co.	do.	Sultana River and Crescent Lake	do.	do.		do.				
11	Big Horn Canyon Irrigation & Power Co.	Mont.	Big Horn River	do.	Feb. 1, 1921		do.	x	x		
12	Henry Ford and Son, Inc.	N. Y.	Hudson River	do.	do.		do.				
13	Hydraulic Race Co.	do.	Barge Canal	do.	do.		do.				
14	Niagara Falls Power Co.	do.	Niagara River	do.	do.		do.				
15	Western Tie & Timber Co.	Mo.	Current River	July 6	Nov. 2, 1920		do.				
16	Idaho Power Co.	Idaho	Snake River	July 7	Dec. 11, 1920		do.	x		x	
17	do.	do.	do.	do.	do.		do.				
18	Utah Power & Light Co.	do.	Bear River	July 8	Nov. 15, 1920		do.				
19	Banks, W. R.	Mo.	Ossage River	July 2	Dec. 11, 1920		do.	x		x	
20	Brady, Paul T.	N. J.	Delaware River	do.	do.		do.				
21	Louisville Power Corporation.	N. Y.	St. Lawrence River	July 8	Oct. 1, 1920		do.				
22	Lower Niagara River Power & Water Supply Co.	do.	Niagara River	do.	do.		do.				
23	Chenault, Courtland Prentice.	Okla.	Arkansas River	July 26	July 1, 1921		do.				
24	Markham, J. D., Kelsey, A., and Drunar, J. F.	Minn.	St. Croix River	July 12	Oct. 14, 1921		do.				
25	Saint Cloud Electric Power Co.	do.	Mississippi River	July 20	May 5, 1922		do.				
26	Beckman & Linden Engineering Corporation.	Ariz.	Colorado River	July 22	do.		1920.	x	x		
27	Canada Syndicate, Ltd., and Duncean, Young & Co., Inc.	N. J.	Delaware River	July 23	Nov. 23, 1920		do.				
28	Hawley, E. W.	Calif.	Silver Creek	do.	do.		do.				

34	Montana Water Power & Electric Co.	Mont.	Flathead River.	July 24	Dec. 13, 1920		x	x	
35	Northwestern Power & Manufacturing Co.	Wash.	Crescent Lake and Lytle River.	Sept. 2	Mar. 18, 1921			x	
36	Polson, Alex. Reed M. E. and Abel, W. H.	Ore.	Willamette River.	July 27					x
37	Crown Willamette Paper Co.	Conn.	Connecticut River.	July 22	Apr. 11, 1921				x
38	Connor, A. P.	Ala.	Coosa River.	July 31	Dec. 13, 1920		x		
41	Alabama Power Co.	Fla.	Withlacoochee River.	Aug. 3			x		
42	The Corvo Co.	Va.	James River.	Aug. 15	Jan. 17, 1921				
43	Big Bend Power Co.	Wash.	Clarks Fork River.	Aug. 10			x		
44	Cooper, Hugh L.	Pa.	Susquehanna River.	Aug. 10					
46	Dromgold, W. A.	Idaho	Boise River.	Aug. 12					
47	Moore's Creek Boulder Gold & Dredging Co.	Ill.	Illinois River.	Aug. 23	Apr. 18, 1922		x		
48	Illinois State of	Ill.		Aug. 23					
49	Tri-State Power & Milling Co. and Tri-State Power Co.	W. Va.	New River.	Aug. 20	Dec. 4, 1920				x
51	Grand Rapids, Village of	Minn.	Mississippi River.	Aug. 23					
52	Dothan, City of	Ala.	Choctawhatchee River.	Sept. 7	Feb. 14, 1921				x
53	Hugo Power Corporation.	Okla.	Little River.	do.					x
54	Washington Development Corporation.	Wash.	Dungeness River and West Fork Creek.	do.					x
55	Bingham, Reed.	Fla.	Perdido, St. J., and Blackwater Rivers.		Sept. 9, 1920				x
57	Columbia Valley Power Co.	Ore.	Deschutes River.	Sept. 14	Sept. 14, 1920				
58	Hill, Luther.	Calif.	Sawmill Creek.	Sept. 23	Nov. 19, 1920		x		
59	Bayard, Edward L.	Ariz.	Colorado River.	do.	Jan. 11, 1921		x		
60	Vogter, L. J.	Alaska.	Swan and Orchard Lakes and Fish Creek.						x
61	Wrangell Paper & Paper Co.	do.	Harding and Grant Creeks.	Sept. 27	Feb. 8, 1921				
62	Seybold, A. P.	Calif.	Klamath River.	Oct. 5	Oct. 5, 1920				x
63	Alaska Endicott Mining & Milling Co.	Alaska.	Lynn Canal.	Oct. 9	Oct. 9, 1920				x
64	Sespe Light & Power Co.	Calif.	Sespe and Pirn Creeks.	Oct. 11	Mar. 8, 1921		x		
65	Mills, William Park.	Mont.	Vermilion River.	do.	June 10, 1921				x
66	Spirit Lake Railway & Power Co.	Wash.	Spirit Lake.	Oct. 14	Nov. 6, 1920		x		
67	Southern California Edison Co.	Calif.	Big Creek.		Oct. 18, 1920		x		
69	United Mills Co.	N. C.	Harpers Creek.		Oct. 18, 1920		x		
70	Rock Creek Power Co.	Mont.	Rock Creek.		Oct. 21, 1920		x		
73	Van Zandt, J. G.	Calif.	Bear Creek and Santa Ana River.		Oct. 23, 1920				
74	Electro Metals Co.	do.	Klamath River.		do.				
75	McDonald, R. G.	do.	Convict Creek.	Oct. 26	Apr. 18, 1921				
76	Pierce, J. Harvey.	do.	Mammoth Creek.	Oct. 25	Mar. 2, 1921				
77	Snow Mountain Water & Power Co.	do.	South Fork of Foul River.						
78	Western States Gas & Electric Co.	do.	South Fork of American River.	Oct. 28	Nov. 23, 1920		x		
79	Albertson, William C., and Mershon, Stephen L.	N. J.	Delaware River.	Oct. 29	Nov. 29, 1920		x		
80	Amazon Dixie Mining Co.	Mont.	(Transmission line)	Nov. 1	Nov. 1, 1920				x
81	Granite Falls Manufacturing Co.	N. C.	Wilson Creek.		Nov. 2, 1920		x		
82	Alabama Power Co.	Ala.	Coosa River.		Nov. 3, 1920		x		
83	Paving Granite Quarry Co.	S. Dak.	(Transmission line)		do.				x
84	Ronan, Town of	Mont.	Crow Creek.				x		
85	Southern California Edison Co.	Calif.	Horse and Salmon Creeks and Kern River.	Nov. 3	Oct. 30, 1920				x
86	Daniel, John.	Mo.	Current River.	Nov. 10	Nov. 9, 1920				x
87	Coast Valleys Gas & Electric Co.	Calif.	(Transmission line)				x		
88	Merced Irrigation District (a municipality)	do.	Merced River.		Nov. 12, 1920				

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Date of application.				Project affects.—		
				Preliminary permit.		License.		Pub- lic lands.	In- dian reser- vations.	Na- tional for- ests.
				Informal.	Formal.	Informal.	Formal.			
89	Garland Hydro Electric Power Co.	Ark.	Ouachita River	1920.		1920.		x		x
90	Baum, Frank G.	Ariz.	Little Colorado River	Nov. 15	Jan. 29, 1921	do.		x	x	
91	do.	do.	Black River	do.	Feb. 19, 1921	do.		x	x	
92	Weeks, R. L.	Alaska	Shutinp Bay	Nov. 18	Dec. 6, 1920	do.		x	x	
93	Alaskan-American Paper Corporation	do.	Orchard Lake	Nov. 18, 1920	Nov. 18, 1920	Nov. 18		x	x	
94	Rose, Emma, and Lane, Anna G. (Utica Mining Co.)	Calif.	Stanislaus River							
95	San Joaquin Light & Power Corporation	do.	San Joaquin River							
96	The Nevada-California Power Co.	do.	Warren, State, Leevining, and Bishop Creeks.							
97	Los Angeles, City of	do.	South and Middle Forks of Kings River.	Nov. 18	Jan. 17, 1921	Nov. 18		x	x	
98	Western States Gas & Electric Co.	do.	Canvon Creek.							
99	Fishhead Valley Electric Co.	Mont.	Flathead River	Nov. 18	Dec. 9, 1920	Nov. 20		x	x	
100	San Joaquin Light & Power Corporation	Calif.	North Fork Kings River	Nov. 18	Dec. 9, 1920	Nov. 20		x	x	
101	Pattee, Frank B., Bernhard, Samuel, and Ross, J. T.	do.	North Fork Stanislaus River	Nov. 22						
102	Home Colony	Wyo.	Kitty Creek							
103	Southern California Edison Co.	Calif.	San Joaquin River	Nov. 22, 1920	Nov. 22, 1920	Nov. 26, 1920				
104	Targhee Power Co.	Idaho	Warm River	Nov. 19, 1920	Nov. 19, 1920	Nov. 30, 1920		x	x	
105	Butte-Jardine Metals Mines Co.	Mont.	Transmission line).							
106	Wisconsin-Minnesota Light & Power Co.	Wis.	Chippewa River	Oct. 26, 1920	Oct. 26, 1920	Dec. 2, 1920		x	x	
107	Leighton, Joseph B.	Mont.	Yellowstone River							
108	Southern California Edison Co.	Ariz.	Colorado River	1920.		1920.				
109	Everett, City of	Wash.	Sultan River	Dec. 4, 1920	Dec. 4, 1920			x	x	
110	Great Basin Power Co.	Utah	North Fork Duchesne River and Wolf Creek	do.	do.			x	x	
111	Mount McKinley Gold Placers	Alaska.	McKinley Fork River and Wonder Lake	Dec. 6	Dec. 8, 1920			x		
112	Shieman, W. H. H., and Quick, Alfred M.	D. C.	Potomac River	Dec. 8, 1920	Dec. 8, 1920					
113	Southern Sierras Power Co.	Calif.	Owens River							
114	do.	do.	(Transmission line)							
115	Gandy, Lloyd E.	Wash.	Spokane River	Dec. 6	Dec. 6			x		
116										
117										
118										
119										

(Military reservation.)

No.	Company	State	Location	Date	Year	Month	Day	Year
119	Baltimore, Frank L.	Alaska	Kenai River	Dec. 9, 1920	1920	Dec.	9	1920
120	Southern California Edison Co.	Calif.	San Joaquin River	Dec. 2, 1920	1920	Dec.	2	1920
121	Grand, James B.	Calif.	Colorado River	Mar. 12, 1921	1921	Mar.	12	1921
122	Los Angeles City of	Calif.	Owens River	Dec. 13, 1920	1920	Dec.	13	1920
123	Southern Sierras Power Co.	Calif.	Whitewater River	Dec. 13, 1920	1920	Dec.	13	1920
124	Love, John B., and von Brecht, G. A.	Idaho	Salmon River	Dec. 10	1920	Dec.	10	1920
125	Trent, Goodwin M.	Calif.	East Fork Carson River	Oct. 10, 1921	1921	Oct.	10	1921
126	Los Angeles City of	Calif.	South Fork Kern River	Dec. 11, 1920	1920	Dec.	11	1920
127	Rust, William B.	Alaska	Cann Creek	Dec. 15, 1920	1920	Dec.	15	1920
128	Eyre, Grace S.	Calif.	Chalk Creek	Dec. 18, 1920	1920	Dec.	18	1920
129	Consolidated Spanish Belt Silver Mining Co.	Nev.	(Transmission line)	Dec. 20, 1920	1920	Dec.	20	1920
130	Expanson, W. E.	Alaska	Summit, Josephine, and Mellen Lakes	Dec. 21, 1920	1920	Dec.	21	1920
131	Kantishna Hydraulic Mining Co.	Calif.	McKinley Fork River	Dec. 22	1920	Dec.	22	1920
132	Los Angeles, City of	Calif.	(Transmission line)	Dec. 23	1920	Dec.	23	1920
133	Portland Railway Light & Power Co.	Oreg.	Clackamas River	Dec. 24	1920	Dec.	24	1920
134	Leelhey, Maurice D.	Alaska	Lake Mahoney	Dec. 27	1920	Dec.	27	1920
135	Crocker, Mary Ives, and Preston, J. W., Jr.	Calif.	North Fork Mokelumne River	Jan. 24, 1921	1921	Jan.	24	1921
136	Hazelet, George C.	Alaska	Silver Lake	Dec. 28, 1920	1920	Dec.	28	1920
137	Loose, C. E.	Calif.	East Walker River	Dec. 29	1920	Dec.	29	1920
138	Butler, Paul	Alaska	Swan Lake et al.	Mar. 14, 1921	1921	Mar.	14	1921
139	McCowan, H. S.	Oreg.	Deschutes River	Dec. 11, 1921	1921	Dec.	11	1921
140	do.	do.	do.	Dec. 28, 1920	1920	Dec.	28	1920
141	Mushen, S. A., and Cronemiller, G. D.	Idaho	Deep and Camas Creeks	Jan. 5, 1921	1921	Jan.	5	1921
142	Idaho Power Co.	Idaho	(Transmission line)	1921	1921			1921
143	Winter, Harold	Fla.	Turkey Creek	Jan. 3	1920	Jan.	3	1920
144	Great Western Power Co.	Calif.	North Fork Feather River	Dec. 28	1920	Dec.	28	1920
145	New York & Ontario Power Co.	N. Y.	Little and St. Lawrence Rivers	Jan. 7, 1921	1921	Jan.	7	1921
146	Benafel, C. S.	Oreg.	Chevaucan River	1921	1921			1921
147	Wyoming Power Co.	Wyo.	Big Horn River	Jan. 7	1921	Jan.	7	1921
148	Central Arizona Light & Power Co.	N. Y.	(Transmission line)	Jan. 6	1921	Jan.	6	1921
149	New York & Ontario Power Co.	N. Y.	St. Lawrence River	Jan. 6	1921	Jan.	6	1921
150	Los Angeles, City of	Calif.	South Fork Kern River	Jan. 12, 1921	1921	Jan.	12	1921
151	Galvin, J. G.	Alaska	Mill Creek and Lake Virginia	Jan. 14, 1921	1921	Jan.	14	1921
152	Elmore Copper Co.	Idaho	South Fork Boise River	Apr. 27, 1921	1921	Apr.	27	1921
153	Southern Sierras Power Co.	Calif.	Snow Creek	Jan. 17	1921	Jan.	17	1921
154	Fairchild, C. E.	Idaho	Bear Creek and Santa Ana River	Mar. 18, 1921	1921	Mar.	18	1921
155	Alaska Development & Mineral Co.	Alaska	Anan and Tyee Creeks and White River	Jan. 19, 1921	1921	Jan.	19	1921
156	Utah Power & Light Co.	Utah	Green River	do.	1921			1921
157	Beise, City of	Idaho	North and South Forks Payette River	do.	1921			1921
158	Alaska Public Utilities	Alaska	Power Creek	Jan. 21, 1921	1921	Jan.	21	1921
159	Waln, Lincoln, and Young, W. T.	Alaska	do.	Jan. 24, 1921	1921	Jan.	24	1921
160	Myser, James F., and Drach, Edward E.	Colo.	Fryingpan Creek	Apr. 8, 1921	1921	Apr.	8	1921
161	Houston Power Co.	Ala.	Choctawhatchee River	Jan. 22, 1921	1921	Jan.	22	1921
162	Utah Power & Light Co.	Utah	Green River	Jan. 24, 1921	1921	Jan.	24	1921

## List of applications filed with the Federal Power Commission—Continued.

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No.	Name of applicant.	State.	Stream.	Date of application.				Project affects—			
				Preliminary permit.		License.		Pub- lic lands.	In- dian reser- vations.	Na- tional for- wa- vers.	
				Informal.	Formal.	Informal.	Formal.				
				1920.		1921.	May 2, 1921			x	
166	The McConnellville-Malta Electric Co.	Ohio.	Muskingum River.		Jan. 26, 1921					x	
167	Kephart, C. I.	Wash.	Spirit Lake.		do.					x	
168	do.	Calif.	North and South Fork White-				Jan. 27, 1921	x		x	
169	Pluth, Marcus.	Calif.	water River.								
170	Tunin, E. N.	Wash.	Lake Koechehus.			Jan. 31				x	
171	Albright, Harrison and Susie Bemus.	Calif.	Whitewater River.		Feb. 7, 1921	Feb. 3	June 10, 1921	x	x	x	
172	Louisiana Gravity Canal Co.	La.	Calcasieu River and Bayou Coco-							x	
			drie.								
173	The Connecticut River Co.	Conn.	Connecticut River.		Feb. 9, 1921		Feb. 11, 1921			x	
174	Southern California Edison Co.	Calif.	(Transmission line).				do.			x	
175	San Joaquin Light & Power Corporation.	do.	East and North Forks Kings River.			Feb. 19	Mar. 20, 1922	x	x	x	
176	Escondido Mutual Water Co.	do.	Bear Creek and San Luis Rey								
			River.								
177	Ocklawaha Reclamation Farms.	Fla.	Ocklawaha River.		Feb. 26, 1921		Feb. 26, 1921			x	
178	San Joaquin Light & Power Corporation.	Calif.	Kern River.							x	
179	Ringling, Richard T.	Mont.	Willow Creek.		Mar. 7, 1921		Mar. 7, 1921	x	x	x	
180	Pacific Gas & Electric Co.	Calif.	(Transmission line).				do.			x	
181	do.	do.	do.				do.			x	
182	Mjelde, Fred.	Mont.	Republic Creek.			Feb. 28				x	
				1921.							
183	Wallace, J. S.	Ky.	Cumberland River.		Mar. 5					x	
184	El Dorado Power Co.	Calif.	South Fork American River.		May 23, 1921			x		x	
185	Southern Sierras Power Co.	do.	High Creek et al.		Jan. 31, 1921		Mar. 14, 1921			x	
186	Copper Harbor Pulp & Power Co.	Alaska.	Joeephine and Mellen Lakes.		Mar. 14, 1921					x	
				1921.							
187	Yuba Development Co.	Calif.	North Fork Yuba River.		Mar. 14, 1921			x		x	
188	Sand Springs Home.	Okla.	Grand or Neesho River.		Mar. 17						
189	Provident Irrigation District.	Calif.	Deer Creek.		do.					x	
190	Utintah Power & Light Co.	Utah.	Pole Creek and Uintah River.		Mar. 21, 1921					x	
191	Little Rock Power & Water Co.	Calif.	Little Rock Creek.		Mar. 23, 1921			x	x	x	
192	Johnson, C. B.	do.	(Transmission line).				Mar. 24, 1921			x	
193	Los Angeles, City of.	do.	Baker and Pig Pine Creeks.		Mar. 24			x	x	x	
194	do.	do.	Rock Creek.		do.			x	x	x	
195	do.	do.	Sawmill and Division Creeks.		do.						



196	do	Cottonwood Creek.	do	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
197	Shaner, H. S.	Current River	Mo.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
198	Boston & Montana Milling & Power Co.	(Santee and Cooper Rivers)	Mont.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
199	Columbia Railway & Navigation Co.	do.	S. C.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
200	Rich Point Mining Co.	Bear Creek	Calif.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
201	Pearceburg, Town of	Crystal Lake	Alaska	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
202	Green River Power Co.	Green River	Utah	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
203	Michael, Thomas P.	Transumission line)	Idaho	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
204	Grangeville Electric Light & Power Co.	Cleaver River	Idaho	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
205	Walshall, E. B.	Kings River	Calif.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
206	George Inlet Packing Co.	Beaver Falls Creek	Alaska.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
207	Kelly Mines Co.	Fishhook Creek and Little Sustina River	do.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
208	Los Angeles, City of	Aqueduct; South Fork Canyon Creek	Calif.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
209	Royal Development Co.	Dry and Chipmunk Creeks	Wash.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
210	Yosemite Power Co.	South Fork Tuolumne River	Calif.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
211	Deprez, Harry W.	Muskingum River	Ohio.	Mar. 26	Mar. 28, 1921	Mar. 30, 1921	Apr. 2, 1921	Apr. 5, 1921	Apr. 11, 1921	Apr. 18, 1921	Apr. 21, 1921	May 4	May 6, 1921	May 9, 1921	May 14, 1921	May 18, 1921	May 18, 1921	May 20, 1921	June 1, 1921	June 2, 1921	June 4, 1921	Sept. 17, 1921	June 11, 1921	June 16, 1921	June 21, 1921	June 27	June 30, 1921	July 5, 1921	July 11, 1921	July 15, 1921	do.	July 21, 1921	July 7, 1921	July 23, 1921	July 25, 1921	do.	Oct. 13, 1921	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	
212	Hirst-Chicago Mining Co.	Head of Didrickson's Bay																																																																									

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Date of application.				Project affects—		
				Preliminary permit.		License.		Pub- lic lands.	In- dian reser- vations.	Na- tional for- wa- vers.
				Informal.	Formal.	Informal.	Formal.			
241	Freshwater Bay Lumber Co., Inc.	Alaska.	Small stream.	1921.	Aug. 9, 1921	1921.	Aug. 13, 1921			
242	Minneapolis, City of.	Minn.	Mississippi River.		Aug. 26, 1921		Oct. 13, 1922			x
243	Dougherty, Frank C.	Alaska.	Salmon Lakes.		Aug. 22, 1921					x
244	do.	do.	Green and Baranof Lakes		do.					x
245	Darwin Silver Co.	Calif.	(Transmission line)		do.		Sept. 6			
246	Dougherty, Frank C.	Alaska.	Speel River.		Aug. 26, 1921		Nov. 2, 1922			
247	Samson, W. H.	Calif.	Stuarts Fork of Trinity River.		Sept. 13, 1921					x
248	Southern Sierras Power Co.	do.	Bear Creek and Santa Ana River.		do.					x
249	Jorgensen, Lars.	do.	North Fork Feather River.		do.					x
250	Northern States Power Co.	Minn.	Mississippi River.		Sept. 20, 1921					x
251	Harding, R. T.	Calif.	Buck and Grizzly Creeks.		Sept. 21, 1921					x
252	Fletcher, Ed.	Calif.	Santa Ysabel River.		Sept. 27, 1921					x
253	Weber, Henry.	Calif.	Denny Creek.		do.		Sept. 28			x
254	Southern Sierras Power Co.	Calif.	(Transmission line).		do.		Oct. 4			x
255	Terzich, Mitchell.	do.	Eagle Creek.		do.					x
256	Galvin, J. G.	Alaska.	Aarons Creek.		Oct. 10, 1921					x
257	Southern California Edison Co.	Ariz.	Colorado River.		Oct. 11, 1921					x
258	Port Klamath Meadows Co.	Oreg.	Anna Creek.		Oct. 27, 1921					x
259	San Joaquin Light & Power Corporation.	Calif.	Merced River.		Oct. 28, 1921					x
260	Hughes, J. H.	Calif.	French Creek.		Nov. 4, 1921					x
261	Hardaway, Benjamin H.	Ala.	Choctawhatchee River.		Nov. 8, 1921					x
262	Barker, William J.	Calif.	Grand River.		Nov. 14, 1921					x
263	Northwestern Electric Co.	Calif.	North Fork Lewis River.		do.					x
264	Hardaway, Benjamin H.	Oreg.	Colorado River.		Nov. 21, 1921					x
265	Mohler, Guy P.	Ariz.	Pea River.		do.					x
266	Hardaway, Benjamin H.	Ala.	Choctawhatchee River.		Nov. 30, 1921					x
267	Killebrew, A. E.	Ala.	Des Moines River.		Dec. 12, 1921					x
268	Oskaloosa, City of.	Iowa.	Mill Creek.		Dec. 28, 1921					x
269	Wrangell, City of.	Alaska.	Kings River.		Jan. 4, 1922					x
270	Mendota Irrigation District.	Calif.	Ouachita River.		do.					x
271	Caddo River Power & Irrigation Co.	Ark.	Columbia River.		Jan. 7, 1922					x
272	Cooper, Hugh L.	Wash.	Moose Creek.		Jan. 16, 1922					x
273	Karst, Peter F.	Mont.	Deschutes River.		Jan. 19, 1922					x
274	Pacific Power & Light Co.	Oreg.	Cascade Creek.		Jan. 27, 1922					x
275	Hutton, McNear & Dougherty.	Ala.	Choctawhatchee River.		do.					x
276	Houston Power Co.	Ala.	Choctawhatchee River.		do.					x

Year	Project	State	Location	Authority	Completion Date	Remarks
1927	Enoch Hydro Electric Co.	Mont.	Graves Creek	Graves Creek	Feb. 1, 1922	
277	Spit Lake Railway & Power Co.	Wash.	Tuttle and Green Rivers	Tuttle and Green Rivers	Feb. 2, 1922	
278	Utah Power & Light Co.	Utah	Green and Yampa Rivers	Green and Yampa Rivers	Feb. 3, 1922	
279	Wilson, Frank M.	Calif.	Willer and Camp Creeks	Willer and Camp Creeks	Feb. 7, 1922	
280	California Oregon Power Co.	Idaho	(Transmission line)	(Transmission line)	Feb. 14, 1922	
281	Brown, B. O. R. Power & Water Co.	Calif.	Pit, Spahn and Cub Run	Pit, Spahn and Cub Run	Feb. 20, 1922	
282	St. Cloud Public Service Co.	Minn.	Mokelumne River	Mokelumne River	Feb. 27, 1922	
283	Mar. 13, 1922	Mississippi River	Mississippi River	Mississippi River	Mar. 9, 1922	
284	Mar. 14, 1922	White River	White River	White River	Mar. 13, 1922	
285	Mar. 16, 1922	Fox River	Fox River	Fox River	Mar. 14, 1922	
286	Ill. Regue River	Ill.	Regue River	Regue River	Mar. 16, 1922	
287	Louisville Gas & Electric Co.	Ky.	Ohio River	Ohio River	Mar. 18, 1922	
288	Mar. 20, 1922	Huntington Creek	Huntington Creek	Huntington Creek	Mar. 20, 1922	
289	Mar. 30, 1922	North Fork of Feather River	North Fork of Feather River	North Fork of Feather River	Mar. 30, 1922	
290	Mar. 31, 1922	(Transmission line)	(Transmission line)	(Transmission line)	Mar. 31, 1922	
291	Mar. 4, 1922	Grand Ronde River	Grand Ronde River	Grand Ronde River	Mar. 4, 1922	
292	Apr. 4, 1922	Chipolla River	Chipolla River	Chipolla River	Apr. 4, 1922	
293	Apr. 10, 1922	(Transmission line)	(Transmission line)	(Transmission line)	Apr. 10, 1922	
294	Apr. 11, 1922	Graigie Creek	Graigie Creek	Graigie Creek	Apr. 11, 1922	
295	Apr. 14, 1922	Kaweah River	Kaweah River	Kaweah River	Apr. 14, 1922	
296	Apr. 15, 1922	Holston River	Holston River	Holston River	Apr. 15, 1922	
297	Apr. 17, 1922	McCloud and Pit Rivers	McCloud and Pit Rivers	McCloud and Pit Rivers	Apr. 17, 1922	
298	Apr. 24, 1922	Menominee River	Menominee River	Menominee River	Apr. 24, 1922	
299	Apr. 28, 1922	Chipolla River	Chipolla River	Chipolla River	Apr. 28, 1922	
300	May 8, 1922	Kentucky River	Kentucky River	Kentucky River	May 8, 1922	
301	May 11, 1922	Hassayampa River	Hassayampa River	Hassayampa River	May 11, 1922	
302	May 16, 1922	American River	American River	American River	May 16, 1922	
303	May 19, 1922	East Fork of Wallows River	East Fork of Wallows River	East Fork of Wallows River	May 19, 1922	
304	May 27, 1922	Claron River	Claron River	Claron River	May 27, 1922	
305	Sept. 20, 1921	St. Croix River	St. Croix River	St. Croix River	Sept. 20, 1921	
306	May 27, 1922	St. Joseph River	St. Joseph River	St. Joseph River	May 27, 1922	
307	May 31, 1922	Snake River	Snake River	Snake River	May 31, 1922	
308	June 1, 1922	Crane Creek	Crane Creek	Crane Creek	June 1, 1922	
309	June 7	Mills and Davidson Rivers	Mills and Davidson Rivers	Mills and Davidson Rivers	June 7	
310	do	Claron River	Claron River	Claron River	do	
311	do	do	do	do	do	
312	June 3, 1922	Niagara River	Niagara River	Niagara River	June 3, 1922	
313	June 13, 1922	Ohio River	Ohio River	Ohio River	June 13, 1922	
314	June 24, 1922	Bishop Creek	Bishop Creek	Bishop Creek	June 24, 1922	
315	(Four transmission lines)	(Four transmission lines)	(Four transmission lines)	(Four transmission lines)	(Four transmission lines)	
316	Total, fiscal year 1921-1922				33	3
317	Total, fiscal year 1921-1922				33	3
318	Total, fiscal year 1921-1922				33	3
319	Total, fiscal year 1921-1922				33	3
320	Total, fiscal year 1921-1922				33	3
321	Total, fiscal year 1921-1922				33	3
322	Total, fiscal year 1921-1922				33	3
323	Total, fiscal year 1921-1922				33	3
324	Total, fiscal year 1921-1922				33	3
325	Total, fiscal year 1921-1922				33	3
326	Total, fiscal year 1921-1922				33	3
327	Total, fiscal year 1921-1922				33	3
328	Total, fiscal year 1921-1922				33	3
329	Total, fiscal year 1921-1922				33	3
330	Total, fiscal year 1921-1922				33	3
331	Total, fiscal year 1921-1922				33	3
332	Total, fiscal year 1921-1922				33	3
333	Total, fiscal year 1921-1922				33	3
334	Total, fiscal year 1921-1922				33	3
335	Total, fiscal year 1921-1922				33	3
336	Total, fiscal year 1921-1922				33	3

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (90 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
1	Dirle Power Co.	Ark.	White River	56,500	100,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	2
2	Sperry, C. W.	Idaho	Moyie River	5,000	5,000	.....	5,000	Canceled June 21, 1922, for lack of jurisdiction.	.....	.....
3	Washington Irrigation & Development Co.	Wash.	Columbia River	210,000	300,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	3
4	Speel River Project.	Alaska	Speel River	46,500	60,000	246	.....	.....	x	.....
5	Rocky Mountain Power Co.	Mont.	Flathead River	176,650	272,000	34	.....	.....	.....	.....
7	Roanoke River Development Co.	Va.	Roanoke River	10,560	50,000	100	.....	Preliminary permit issued July 19, 1921.	.....	3
8	St. Lawrence Transmission Co.	N. Y.	St. Lawrence River	608,000	750,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	14
9	Pitt River Power Co.	Calif.	Pitt River	76,100	138,000	.....	.....	Preliminary permit issued Aug. 3, 1922.	.....	2
10	Sound Power Co.	Wash.	Sultana River and Olney Creek.	71,400	142,800	112	.....	.....	.....	.....
11	Straits Power Co.	do.	Soldue River and Crescent Lake.	42,000	95,000	35	.....	Preliminary permit issued June 28, 1922.	.....	3
12	Big Horn Canyon Irrigation & Power Co.	Mont.	Big Horn River	97,070	210,000	.....	.....	License issued Mar. 3, 1921.	x	50
13	Henry Ford and Son, Inc.	N. Y.	Hudson River	3,640	8,100	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	14
14	Hydraulic Race Co.	do.	Barge Canal	12,500	12,500	.....	.....	License issued Mar. 2, 1921.	x	50
16	Niagara Falls Power Co.	do.	Niagara River	341,505	572,230	.....	.....	Preliminary permit issued Aug. 24, 1921.	.....	2
17	Western Tie & Timber Co.	Mo.	Current River	4,000	15,000	.....	.....	.....	.....	.....
18	Idaho Power Co.	Idaho	Snake River	8,426	10,000	.....	.....	.....	.....	.....
19	do.	do.	do.	32,000	80,000	.....	.....	.....	.....	.....
20	Utah Power & Light Co.	do.	Bear River	21,500	50,000	.....	.....	Preliminary permit issued July 19, 1921.	.....	24
21	Banks, W. R.	Mo.	Osage River	4,000	4,000	.....	.....	Preliminary permit issued Mar. 9, 1922.	.....	2
22	Bredy, Paul T.	N. J.	Delaware River	169,000	200,000	81	.....	.....	.....	.....
23	Louisville Power Corporation.	N. Y.	St. Lawrence River	647,200	600,000	151	.....	.....	.....	.....

24	Lower Niagara River Power & Water Supply Co.	do.	Niagara River.	200,000	250,000			Preliminary permit issued Mar. 2, 1921.	
27	Chenault, Courland Prentice, Markham, J. D., Kelsey, A., and Drnar, J. F.	Oklahoma	Arkansas River.	3,000	4,000	310	7,900		
28	Saint Cloud Electric Power Co.	do.	St. Croix River.	7,900	15,800				
29	Beckman and Linden Engineering Corporation.	Ariz.	Mississippi River.	7,280	12,000	250	7,280	Rejected June 23, 1922.	
30	Canada Syndicate, Ltd. and Duncan, Young & Co., Inc.	Ariz.	Colorado River.	115,200	200,000				
31	Hawley, R. W.	N. J.	Delaware River.	361,400	432,300	{ 22 } 169,000		Preliminary permit issued Aug. 24, 1921.	14
32	Montana Water Power & Electric Co.	Calif.	Silver Creek.	44,680	75,000	{ 79 }			
34	Northwestern Power & Manufacturing Co.	Mont.	Flathead River.	67,200	110,000	{ 5 } 67,200			
35	Polson, Alex. Reed, M. E., and Abel, W. H.	Wash.	Crescent Lake and Lyre River.	5,300	10,000	{ 11 }	5,300		
36	Crown Williamette Paper Co.	do.	Wynacche River.	400	500		400	Withdrawn Mar. 11, 1922.	
38	Alabama Power Co.	Oreg.	Williamette River.	7,200	7,200				x
41	The Cove Co.	Conn.	Connecticut River.	30,000	30,000	173	30,000	Rejected Oct. 6, 1921.	
42	Big Bend Power Co.	Fla.	Coosa River.	12,000	30,000				
43	Cooper, Hugh L.	Va.	Withlacoochee River.	920	1,100				
44	Dromgold, W. A.	Wash.	James River.	19,200	60,000				
45	Moore's Creek Boulder Gold & Dredging Co.	Pa.	Clarks Fork River.	195,000	350,000				
46	Illinois, State of.	Idaho	Susquahanna River.	38,400	80,000				
47	Tri-State Power & Milling Co. and Tri-State Power Co.	Ill.	Boise River.	400	500				
48	Grand Rapids, Village of.	W. Va.	Illinois River.	41,450	50,000			Preliminary permit issued Jan. 14, 1922.	3
51	Dodman, City of.	Minn.	New River.	20,000	30,000		20,000	Withdrawn Aug. 12, 1921.	
52	Hugo Power Corporation.	Ala.	Mississippi River.	1,650	3,300				
53	Washington Development Corporation.	Ala.	Choctawhatchee River.	3,570	6,000	164		Preliminary permit issued Oct. 1, 1921.	14
54	Bingham, Reed	Okla.	Little River.	5,000	10,000				
55	Columbia Valley Power Co.	Wash.	Dungess River and West Fork Creek.	20,000	40,000		20,000	Withdrawn Aug. 12, 1921.	
56	Hill, Luther	Pa.	Perdido, Styx, and Blackwater Rivers.	5,120	16,000			Preliminary permit issued Oct. 12, 1921.	2
57	Byard, Edward L.	Oreg.	Deschutes River.	220,300	440,000	141		License issued Mar. 3, 1921.	25
58		Calif.	Sawmill Creek.	80		{ 111 }			
59		Ariz.	Colorado River.	1,400,000	1,800,000	{ 121 } 220			
60	Vogler, L. J.	Alaska	{ Swan and Orchard Lakes and Fish Creek.	13,000	17,500	{ 231 } 258			
61	Wrangell Pulp & Paper Co.	do.	Harding and Grant Creeks.	1,280	1,500	{ 258 } 94	13,000	Rejected Mar. 27, 1922.	
						{ 140 }		Preliminary permit issued May 6, 1922.	2

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (80 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
1	Dixie Power Co.....	Ark.	White River.....	56,500	100,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	2
2	Sperry, C. W.....	Idaho	Moyle River.....	5,000	5,000	.....	5,000	Canceled June 21, 1922, for lack of jurisdiction.	.....	.....
3	Washington Irrigation & Development Co.....	Wash.	Columbia River.....	210,000	300,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	x	3
4	Speel River Project.....	Alaska.	Speel River.....	46,500	60,000	246	.....	.....	.....	.....
5	Rocky Mountain Power Co.....	Mont.	Flathead River.....	176,650	272,000	34	.....	.....	.....	.....
7	Roanoke River Development Co.	Va.	Roanoke River.....	10,560	50,000	100	.....	Preliminary permit issued July 16, 1921.	.....	3
8	St. Lawrence Transmission Co.....	N. Y.	St. Lawrence River.....	698,000	750,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	1½
9	Pitt River Power Co.....	Calif.	Pitt River.....	76,100	138,000	.....	.....	Preliminary permit issued Mar. 3, 1921.	.....	2
10	Sound Power Co.....	Wash.	Sultan River and Olney Creek.	71,400	142,800	112	.....	Preliminary permit issued Aug. 3, 1922.	.....	.....
11	Straits Power Co.....	do.	Solduc River and Crescent Lake.	42,000	95,000	35	.....	.....	.....	.....
12	Big Horn Canyon Irrigation & Power Co.....	Mont.	Big Horn River.....	97,070	210,000	.....	.....	Preliminary permit issued June 28, 1922.	.....	3
13	Henry Ford and Son, Inc.....	N. Y.	Hudson River.....	3,640	8,100	.....	.....	License issued Mar. 3, 1921.	.....	50
14	Hydraulic Race Co.....	do.	Barge Canal.....	12,540	12,500	.....	.....	Preliminary permit issued Mar. 3, 1921.	x	1½
16	Niagara Falls Power Co.....	do.	Niagara River.....	341,595	572,230	.....	.....	License issued Mar. 2, 1921.	x	50
17	Western Tie & Timber Co.....	Mo.	Current River.....	4,000	15,000	.....	.....	Preliminary permit issued Aug. 24, 1921.	.....	2
18	Idaho Power Co.....	Idaho.	Snake River.....	8,420	10,000	.....	.....	.....	.....	.....
19	do.....	do.	do.....	32,000	80,000	.....	.....	.....	.....	.....
20	Utah Power & Light Co.....	do.	Bear River.....	21,500	50,000	.....	.....	Preliminary permit issued July 19, 1921.	.....	2½
21	Banta, W. B.....	Mo.	Ossage River.....	4,000	4,000	.....	.....	Preliminary permit issued Mar. 9, 1922.	.....	2
22	Brady, Paul T.....	N. J.	Delaware River.....	160,000	200,000	.....	.....	.....	.....	.....
23	Louisville Power Corporation....	N. Y.	St. Lawrence River.....	547,200	600,000	31 79 151	.....	.....	.....	.....

24	Lower Niagara River Power & Water Supply Co.	do.	Niagara River	200,000	250,000			Preliminary permit issued Mar. 2, 1921.	
27	Chenault, Courland Prentice	Okl.	Arkansas River	3,000	4,000	310	7,900		
28	Markham, J. D., Kelsey, A., and Drnar, J. F.	Minn.	St. Croix River	7,900	15,800				
29	Saint Cloud Electric Power Co.	do.	Mississippi River	7,280	12,000	250	7,280	Rejected June 23, 1922.	
30	Beckman and Linden Engineering Corporation.	Ariz.	Colorado River	115,200	200,000				
31	Canada Syndicate, Ltd., and Duncan, Young & Co., Inc.	N. J.	Delaware River	361,400	432,300	{ 22 } 169,000		Preliminary permit issued Aug. 24, 1921.	14
32	Hawley, E. W.	Calif.	Silver Creek	44,680	75,000	{ 79 }			
34	Montana Water Power & Electric Co.	Mont.	Flathead River	67,200	110,000	{ 5 } 67,200			
35	Northwestern Power & Manufacturing Co.	Wash.	Crescent Lake and Lyre River	5,300	10,000	11	5,300		
36	Polson, Alex., Reed, M. E., and Abel, W. H.	do.	Wynoeche River	400	500		400	Withdrawn Mar. 11, 1922.	
38	Crown Williamette Paper Co.	Oreg.	Williamette River	7,200	7,200				x
40	Connor, A. P.	Conn.	Connecticut River	30,000	30,000	173	30,000	Rejected Oct. 6, 1921.	
41	Alabama Power Co.	Ala.	Coosa River	12,000	30,000				
42	The Cove Co.	Fla.	Withlacoochee River	920	1,100				
43	Big Bend Power Co.	Va.	James River	19,200	60,000				
44	Cooper, Hugh L.	Wash.	Clarks Fork River	196,000	350,000				
45	Dromgold, W. A.	Pa.	Susquehanna River	38,400	80,000				
46	Moore's Creek Boulder Gold & Dredging Co.	Idaho.	Boise River	400	500				
48	Illinois, State of	Ill.	Illinois River	41,450	50,000			Preliminary permit issued Jan. 14, 1922.	3
49	Tri-State Power & Milling Co. and Tri-State Power Co.	W. Va.	New River	20,000	30,000		20,000	Withdrawn Aug. 12, 1921.	
51	Grand Rapids, Village of.	Minn.	Mississippi River	1,650	3,300				
52	Dodhan, City of.	Ala.	Choctawhatchee River	3,570	6,000	164		Preliminary permit issued Oct. 1, 1921.	14
53	Hugo Power Corporation	Okla.	Little River	5,000	10,000				
54	Washington Development Corporation	Wash.	Dungeness River and West Fork Creek	20,000	40,000		20,000	Withdrawn Aug. 12, 1921.	
55	Bingham, Reed	Pa.	Péridio, Sixty, and Blackwater Rivers.	5,120	16,000			Preliminary permit issued Oct. 12, 1921.	2
57	Columbia Valley Power Co.	Oreg.	Deschutes River	220,300	440,000	141		License issued Mar. 3, 1921.	25
58	Hill, Luther	Calif.	Sawmill Creek	80	250	{ 111 } 121			
59	Byard, Edward L.	Ariz.	Colorado River	1,400,000	1,800,000	{ 220 } 231			
60	Vogler, L. J.	Alaska	{ Swan and Orchard Lakes and Fish Creek.	13,000	17,500	{ 258 } 258		Rejected Mar. 27, 1922.	
61	Wrangell Pulp & Paper Co.	do.	Harding and Grant Creeks	1,280	1,500	{ 94 } 140	13,000	Preliminary permit issued May 6, 1922.	2

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (60 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
1	Dixie Power Co.....	Ark.....	White River.....	56,500	100,000			Preliminary permit issued Mar. 3, 1921.		2
2	Sperry, C. W.....	Idaho.....	Moyle River.....	5,000	5,000		5,000	Canceled June 21, 1922, for lack of jurisdiction.		
3	Washington Irrigation & Development Co.....	Wash.....	Columbia River.....	210,000	300,000			Preliminary permit issued Mar. 3, 1921.		3
4	Speel River Project.....	Alaska.....	Speel River.....	46,500	60,000	246			x	
5	Rocky Mountain Power Co.....	Mont.....	Flathead River.....	176,650	272,000	34				
6	Roanoke River Development Co.....	Va.....	Roanoke River.....	10,860	50,000	100		Preliminary permit issued July 19, 1921.		3
7	St. Lawrence Transmission Co.....	N. Y.....	St. Lawrence River.....	603,000	750,000			Preliminary permit issued Mar. 3, 1921.		14
8	Pitt River Power Co.....	Calif.....	Pit River.....	70,100	138,000			Preliminary permit issued Aug. 3, 1922.		2
9	Sound Power Co.....	Wash.....	Sultan River and Olney Creek.....	71,400	142,800	112				
10	Straits Power Co.....	do.....	Soldine River and Crescent Lake.....	42,000	95,000	35				
11	Big Horn Canyon Irrigation & Power Co.....	Mont.....	Big Horn River.....	97,070	210,000			Preliminary permit issued June 28, 1922.		3
12	Henry Ford and Son, Inc.....	N. Y.....	Hudson River.....	3,640	8,100			License issued Mar. 3, 1921.		50
13	Hydraulic Race Co.....	do.....	Barge Canal.....	12,800	12,800			Preliminary permit issued Mar. 3, 1921.	x	14
14	Niagara Falls Power Co.....	do.....	Niagara River.....	341,505	572,230			License issued Mar. 2, 1921.	x	50
15	Western Tie & Timber Co.....	Me.....	Current River.....	4,000	15,000			Preliminary permit issued Aug. 24, 1921.		2
16	Idaho Power Co.....	Idaho.....	Snake River.....	8,420	10,000					
17	do.....	do.....	do.....	32,000	80,000					
18	Utah Power & Light Co.....	do.....	Bear River.....	21,500	50,000			Preliminary permit issued July 19, 1921.		24
19	Banks, W. B.....	Mo.....	Ossage River.....	4,000	4,000			Preliminary permit issued Mar. 9, 1922.		2
20	Brody, Paul T.....	N. J.....	Delaware River.....	160,000	200,000	31				
21	Louisville Power Corporation.....	N. Y.....	St. Lawrence River.....	547,200	600,000	79	151			



No.	Company	State	Water Power	Capacity	Value	Permit	Remarks
24	Lower Niagara River Power & Water Supply Co.	do.	Niagara River	200,000	250,000	Preliminary permit issued Mar. 2, 1921.	
25	Chenault, Crawford and Prentiss	Okl.	Arkansas River	3,000	4,000		
26	Marshall, D. F., Kelsey, A., and Minn.	do.	St. Croix River	7,900	15,800	310	7,900
27	Drummond, J. F.	do.	Mississippi River	7,280	12,000	250	7,280
28	Saint Cloud Electric Power Co.	do.	Colorado River	115,200	200,000		
29	Beckman and Linden Engineering Corporation	Ariz.	Delaware River	361,400	423,300	{ 23 } 169,000	
30	Canada Syndicate, Ltd., and Duncun, Young & Co., Inc.	N. J.	Silver Creek	44,680	75,000	{ 79 } 100,000	Preliminary permit issued Aug. 24, 1921.
31	Hawley, R. W.	Calif.	Flathead River	67,200	110,000	{ 5 } 67,200	
32	Montana Water Power & Electric Co.	Mont.	Crescent Lake and Lyre River	5,300	10,000	{ 11 } 5,300	
33	Northwestern Power & Manufacturing Co.	Wash.	Wynoeche River	400	500	400	With drawn Mar. 11, 1922.
34	Polson, Alex. Reed, M. E., and Abel, W. H.	do.	Willamette River	7,200	7,200		
35	Crown Williamette Paper Co.	Oreg.	Connecticut River	30,000	30,000	173	30,000
36	Common, A. P.	Conn.	Cocosa River	12,000	30,000		Rejected Oct. 6, 1921.
37	Alabama Power Co.	Ala.	Withlacoochee River	1,100	1,100		
38	The Cove Co.	Fla.	James River	19,200	60,000		
39	Big Bend Power Co.	Va.	Clarks Fork River	196,000	350,000		
40	Cooper, Hugh L.	Wash.	Susquehanna River	38,400	80,000		
41	Dromgold, W. A.	Pa.	Boise River	400	500		
42	Moore's Creek Boulder Gold & Dredging Co.	Idaho	Illinois River	41,450	50,000		Preliminary permit issued Jan. 14, 1922.
43	Illinois, State of	Ill.	New River	20,000	30,000	20,000	With drawn Aug. 12, 1921.
44	Tri-State Power & Milling Co. and Tri-State Power Co.	W. Va.	Mississippi River	1,650	3,300		
45	Grand Rapids, Village of	Minn.	Choctawhatchee River	3,570	6,000	164	Preliminary permit issued Oct. 1, 1921.
46	Dothan, City of	Ala.	Little River	5,000	10,000		
47	Hugo Power Corporation	Okl.	Dungunnes River and West Fork Creek	20,000	40,000	20,000	With drawn Aug. 12, 1921.
48	Washington Development Corporation	Wash.	Perdido, Styrz, and Blackwater Rivers	5,120	10,000		Preliminary permit issued Oct. 12, 1921.
49	Bingham, Reed	Fa.	Dredging Co.	220,300	440,000	141	License issued Mar. 3, 1921.
50	Columbia Valley Power Co.	Oreg.	Sawmill Creek	80	250	{ 111 } 121	
51	Hill, Luther	Calif.	Colorado River	1,400,000	1,800,000	{ 231 } 238	
52	Bevard, Edward L.	Ariz.	(Swan and Orchard Lakes and Fish Creek)	13,000	17,500	{ 94 } 140	Rejected Mar. 27, 1922.
53	Vogter, L. J.	Alaska	Harding and Grant Creeks	1,280	1,500	153	Preliminary permit issued May 6, 1922.
54	Wrangell Pulp & Paper Co.	do.					

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (40 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
1	Dixie Power Co.....	Ark.....	White River.....	56,500	100,000			Preliminary permit issued Mar. 3, 1921.		2
2	Sperry, C. W.....	Idaho.....	Moyle River.....	5,000	5,000		5,000	Canceled June 21, 1922, for lack of jurisdiction.		
3	Washington Irrigation & Development Co.....	Wash.....	Columbia River.....	210,000	300,000			Preliminary permit issued Mar. 3, 1921.	x	3
4	Speel River Project.....	Alaska.....	Speel River.....	46,500	60,000	246				
5	Rocky Mountain Power Co.....	Mont.....	Flathead River.....	176,650	272,000	34				
6	Roanoke River Development Co.....	Va.....	Roanoke River.....	10,560	50,000	100		Preliminary permit issued July 19, 1921.		3
7	St. Lawrence Transmission Co.....	N. Y.....	St. Lawrence River.....	608,000	750,000			Preliminary permit issued Mar. 3, 1921.		1½
8	Pitt River Power Co.....	Calif.....	Pitt River.....	76,100	138,000			Preliminary permit issued Aug. 3, 1922.		2
9	Sound Power Co.....	Wash.....	Sultan River and Olney Creek.....	71,400	142,800	112				
10	Straits Power Co.....	do.....	Solduc River and Crescent Lake.....	42,000	95,000	35				
11	Big Horn Canyon Irrigation & Power Co.....	Mont.....	Big Horn River.....	97,070	210,000			Preliminary permit issued June 28, 1922.		3
12	Henry Ford and Son, Inc.....	N. Y.....	Hudson River.....	3,640	8,100			License issued Mar. 3, 1921.		50
13	Hydraulic Race Co.....	do.....	Barge Canal.....	12,800	12,500			Preliminary permit issued Mar. 3, 1921.	x	1½
14	Niagara Falls Power Co.....	do.....	Niagara River.....	341,505	572,230			License issued Mar. 2, 1921.	x	50
15	Western Tile & Timber Co.....	Mo.....	Current River.....	4,000	15,000			Preliminary permit issued Aug. 24, 1921.		2
16	Idaho Power Co.....	Idaho.....	Snake River.....	8,420	10,000					
17	do.....	do.....	do.....	32,000	80,000					
18	Utah Power & Light Co.....	do.....	Bear River.....	21,500	50,000			Preliminary permit issued July 19, 1921.		2½
19	Banka, W. B.....	Mo.....	Osage River.....	4,000	4,000			Preliminary permit issued Mar. 9, 1922.		2
20	Brody, Paul T.....	N. J.....	Delaware River.....	160,000	200,000	31				
21	Louisville Power Corporation.....	N. Y.....	St. Lawrence River.....	547,200	600,000	79				
22						151				

No.	Applicant	State	River	Amount	Permit	Remarks
24	Lower Niagara River Power & Water Supply Co.	do.	Niagara River	200,000	200,000	Preliminary permit issued Mar. 2, 1921.
25	Chas. F. G. & Co., Inc.	Ohio	Arkansas River	4,000	4,000	
26	Chas. F. G. & Co., Inc.	Ohio	St. Croix River	7,900	7,900	
27	Chas. F. G. & Co., Inc.	Ohio	St. Croix River	310	310	
28	St. Cloud Electric Power Co.	do.	Mississippi River	7,280	7,280	Rejected June 23, 1922.
29	Beckman & Lunden Engineering Corporation	Ariz.	Colorado River	115,300	200,000	
30	Canada Syndicate, Ltd., and Duncun, Young & Co., Inc.	N. J.	Delaware River	361,400	432,300	
31	Hawley, R. W.	Calif.	Silver Creek	44,680	75,000	Preliminary permit issued Aug. 24, 1921.
32	Montana Water Power & Electric Co.	Mont.	Flathead River	67,200	110,000	
33	Northwestern Power & Manufacturing Co.	Wash.	Crescent Lake and Lyre River	5,300	10,000	
34	Polson, Alex. Reed, M. E., and Abel, W. H.	do.	Wynacoe River	400	500	
35	Crown Williamette Paper Co.	Oreg.	Williamette River	7,200	7,200	
36	Conn. A. P.	Conn.	Coosa River	30,000	30,000	Rejected Oct. 6, 1921.
37	Alabama Power Co.	Ala.	Withlacoochee River	12,000	173	
38	The Cove Co.	Fla.	James River	920	30,000	
39	Big Bend Power Co.	Va.	Clarks Fork River	19,200	60,000	
40	Cooper, Hugh L.	Wash.	Susquehanna River	195,000	350,000	
41	Dromgold, W. A.	Pa.	Boise River	38,400	80,000	
42	Moore's Creek Boulder Gold & Dredging Co.	Idaho	Boise River	400	500	
43	Illinois, State of	Ill.	Illinois River	41,450	50,000	
44	Tri-State Power & Milling Co. and Tri-State Power Co.	W. Va.	New River	20,000	30,000	Preliminary permit issued Jan. 14, 1922.
45	Grand Rapids, Village of	Minn.	Mississippi River	1,650	20,000	Withdrawn Aug. 12, 1921.
46	Dothan, City of	Ala.	Choctawhatchee River	3,300	6,000	
47	Hugo Power Corporation	Okla.	Little River	5,000	10,000	Preliminary permit issued Oct. 1, 1921.
48	Washington Development Corporation	Wash.	Dungeness River and West Fork Creek	20,000	40,000	Withdrawn Aug. 12, 1921.
49	Bingham, Reed	Fa.	Perdido River, and Black-Deschutes River	5,120	10,000	
50	Columbia Valley Power Co.	Oreg.	Deschutes River	220,300	440,000	Preliminary permit issued Oct. 12, 1921.
51	Hill, Luther	Calif.	Sawmill Creek	80	250	License issued Mar. 3, 1921.
52	Colorado River	Ariz.	Colorado River	1,400,000	1,800,000	
53	Swan and Orchard Lakes and Fish Creek	Alaska	(Swan and Orchard Lakes and Fish Creek)	13,000	17,500	
54	Harding and Grant Creeks	do.	Harding and Grant Creeks	1,280	1,500	Preliminary permit issued May 6, 1922.

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower.		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (80 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
62	Seybold A. P.	Calif.	Klamath River.	15,200	30,000			License issued Apr. 18, 1922.		25
63	Alaska Endicott Mining & Milling Co.	Alaska.	Lynn Canal.	350	1,000					
64	Sespe Light & Power Co.	Calif.	Sespe and Piru Creeks.	6,470	45,300					
65	Mills, William Park.	Mont.	Vermilion River.	600	600					
66	Spirit Lake Railway & Power Co.	Wash.	Spirit Lake.	15,430	16,000	168	15,480	License issued Mar. 3, 1921.		50
67	Southern California Edison Co.	Calif.	Big Creek.	158,008	546,000			Preliminary permit issued Mar. 3, 1921.		14
68	United Mills Co.	N. C.	Harpers Creek.	520	1,400			License issued Aug. 29, 1921.		50
70	Rock Creek Power Co.	Mont.	Rock Creek.	1,000	1,880					
73	Van Zandt, J. G.	Calif.	Bear Creek and Santa Ana River.	26,040	50,000	186				
74	Electro Metals Co.	do.	Klamath River.	63,600	127,200			Preliminary permit issued June 15, 1922.		2
75	McDonald, R. G.	do.	Convict Creek.	2,000	6,250			Canceled June 20, 1922.		
76	Pierce, J. Harvey.	do.	Mammoth Creek.	740	1,000		740	License issued Apr. 15, 1922.	x	50
77	Snow Mountain Water & Power Co.	do.	South Fork of Eel River.	14,400	14,670				x	50
78	Western States Gas & Electric Co.	do.	South Fork of American River.	6,400	8,100			License issued Dec. 20, 1921.	x	50
79	Albertson, William C., and Merzhon, Stephen L.	N. J.	Delaware River.	20,000	80,000	31,22	20,000	Canceled Apr. 12, 1922.		
80	Amazon Dixie Mining Co.	Mont.	(Transmission line).					License issued Mar. 3, 1921.		25
81	Granite Falls Manufacturing Co.	N. C.	Wilson Creek.	2,640	5,000			Preliminary permit issued July 19, 1921.		1
82	Alabama Power Co.	Ala.	Cocosa River.	21,700	110,000			License issued June 27, 1921.		50
83	Paving Granite Quarry Co.	S. Dak.	(Transmission line).					License issued Mar. 3, 1921.		25
84	Ronan, Town of.	Mont.	Crow Creek.	1,520	2,500					
85	Southern California Edison Co.	Calif.	Horse and Salmon Creeks and Kern River.	3,000	3,000					
86	Daniell, John.	Mo.	Current River.	12,000	30,000	17	12,000	Rejected July 11, 1921.		50
87	Coast Valleys Gas & Electric Co.	Calif.	(Transmission line).					License issued Mar. 3, 1921.		50
88	Merced Irrigation District (a municipality).	Calif.	Merced River.	10,000	20,000			Preliminary permit issued July 19, 1921.		2
89	Garland Hydro Electric Power Co.	Ark.	Onaculta River.	9,600	18,000		9,600	Withdrawn Feb. 15, 1922.		



## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower.		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (80 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
127	Trent, Goodwin M.	Calif.	East Fork Carson River	16,800	45,000					
128	Los Angeles, City of	do.	South Fork Kern River	4,800	10,000					
129	Rust, William R.	Alaska	Cann Creek	262	260	213	260	Withdrawn Dec. 3, 1921.		
130	Eyre, Grace S.	Calif.	Chalk Creek	562	800			License issued Dec. 12, 1921.		50
131	Consolidated Spanish Belt Silver Mining Co.	Nev.	(Transmission line)					License issued Mar. 3, 1921.		25
132	Epperson, W. E.	Alaska	Summit, Josephine, and Mel-jen Lakes	7,000	10,000	186				
133	Kauaiha Hydraulic Mining Co.	do.	McKinley Fork River	500	500	114	500			
134	Los Angeles, City of	Calif.	(Transmission line)							
135	Portland Ry. Light & Power Co.	Oreg.	Chickamas River	26,300	30,000			License authorized Apr. 17, 1922.		50
136	Leehey, Maurice D.	Alaska	Lake Mahoney	12,250	15,000	206	12,250	Withdrawn Mar. 11, 1922.		
137	Creek, Mary Ives, and Preston, J. W., Jr.	Calif.	North Fork Mokelumne River	33,600	48,400					
138	Hazel, George C.	Alaska	Silver Lake	726	1,500			Preliminary permit issued Nov. 23, 1921.		2
139	Loose, C. E.	Calif.	East Walker River	2,560	12,000					
140	Butler, Paul	Alaska	Swan Lake et al.	16,440	26,000	60	16,440	Withdrawn June 30, 1922.		
141	McGowan, H. S.	Oreg.	Deschutes River	55,400	110,000	57	55,400			
142	do.	do.	do.	27,200	54,000	274	27,200			
143	Mitchell, S. A., and Conzemiller, G. D.	Idaho	Deep and Camas Creeks	27,200	300			Preliminary permit issued May 25, 1922.		1
144	Idaho Power Co.	Idaho	(Transmission line)					License issued Nov. 12, 1921.		50
145	Winter, Harold	Calif.	North Fork Feather River	400	100		400	Canceled Oct. 1, 1921.		
146	Great Western Power Co.	Calif.	North Fork Feather River	44,300	52,000					
147	New York & Ontario Power Co.	N. Y.	Little and St. Lawrence Rivers	26,880	30,000	151	26,880			
148	Benefield, C. S.	Oreg.	Chehalem River	60	60			License issued Aug. 24, 1921.		50
149	Wyoming Power Co.	Wyo.	Big Horn River	1,300	2,600	221		License issued May 1, 1922.	x	50
150	Central Arizona Light & Power Co.	Ariz.	(Transmission line)							
151	New York & Ontario Power Co.	N. Y.	St. Lawrence River	395,200	400,000	147	395,200	(International Joint Commis-sion.)		
152	Los Angeles, City of	Calif.	South Fork Kern River	19,700	25,000	23		Rejected May 17, 1922.		
153	Galvin, J. G.	Alaska	Mill Creek and Lake Virginia	1,700	2,000	61	1,700			

154	Elmore Copper Co.	Idaho.	South Fork Boise River.	6,000	6,000				Preliminary permit issued Jan. 31, 1922.	2
155	Southern Sierras Power Co.	Calif.	Snow Creek.	850	3,750				License issued Aug. 16, 1922.	50
156	Fairchild, C. E.	do.	Bear Creek and Santa Ana River.	9,970	13,200	73	9,970			
157	Alaska Development & Mineral Co.	Alaska.	Anan and Tye Creeks and White River.	18,200	28,000				Preliminary permit issued Mar. 13, 1922.	2
158	Utah Power & Light Co.	Utah.	Green River.	80,000	100,000	202			Preliminary permit issued May 12, 1922.	14
159	Boise, City of.	Idaho.	North and South Forks Payette River.	11,980	30,000				Preliminary permit issued May 11, 1922.	2
160	Alaska Public Utilities.	Alaska.	Power Creek.	1,000	1,340	162			Rejected Mar. 27, 1922.	2
162	Wain, Lincoln and Young, W. T.	do.	do.	1,500	2,500	160	1,500		Preliminary permit issued Mar. 14, 1922.	2
163	Myser, James F., and Drach, Edward E.	Calo.	Fryingpan Creek.	50,000	100,000					
164	Houston Power Co.	Ala.	Choctawhatchee River.	1,250	2,000					
165	Utah Power & Light Co.	Utah.	Green River.	78,570	125,000	202				
166	The McConnellsville-Malta Electric Co.	Ohio.	Muskingum River.	210	250	52	1,250			
167	Kephart, C. I.	Wash.	Kalama River.	19,000	30,000				License issued Aug. 24, 1921.	50
168	do.	do.	Spirit Lake.	2,800	4,000	66	19,000		Rejected June 23, 1922.	
169	Pitts, Marcus.	Calif.	North and South Forks White-water River.	4,300	8,000	171	2,800		do.	
170	Tunin, E. N.	Wash.	Lake Keechelus.	10	10	124	4,300		do.	
171	Albright, Harrison and Susie Remus.	Calif.	Whitewater River.	400	800		10		Cancelled Oct. 5, 1921.	
172	Louisiana Gravity Canal Co.	La.	Calcasieu River and Bayou Cecodrie.	40,000	55,000				Preliminary permit issued Jan. 4, 1922.	14
173	The Connecticut River Co.	Conn.	Connecticut River.	20,000	20,000	40			Preliminary permit issued Nov. 10, 1921.	2
174	Southern California Edison Co.	Calif.	(Transmission line).						License issued Mar. 3, 1921.	50
175	San Joaquin Light & Power Corporation.	do.	East and North Forks Kings River.	161,000	266,000				License issued July 28, 1922.	50
176	Escondido Mutual Water Co.	do.	Bear Creek and San Luis Rey River.	180	400					
177	Ocklawaha Reclamation Farms.	Fla.	Ocklawaha River.	500	1,000					
178	San Joaquin Light & Power Corporation.	Calif.	Kern River.	4,900	12,000				Preliminary permit issued Dec. 23, 1921.	3
179	Ringling, Richard T.	Mont.	Willow Creek.	75	250					
180	Pacific Gas & Electric Co.	Calif.	(Transmission line).			75			Withdrawn Mar. 30, 1922.	50
181	do.	do.	do.						License issued Jan. 6, 1922.	50
182	Weldte, Fred.	Mont.	Republic Creek.	220	220				do.	
183	Wallace, J. S.	N.Y.	Cumberland River.	70,800	80,000				Withdrawn Feb. 6, 1922.	
184	El Dorado Power Co.	Calif.	South Fork American River.	30,000	100,000		70,900		License issued June 30, 1922.	50
185	Southern Sierras Power Co.	do.	High Creek and Mellon Lakes.	7,000	7,000				License issued Nov. 2, 1921.	50
186	Shoppert Harbor Pulp & Power Co.	Alaska.	North Fork of the River.	41,000	112	132	7,000			
187	Yukon Development Co.	Calif.	North Fork of the River.	227,000	41,000	237				
188	Sand Springs Home.	Okla.	Dear Creek.	26,880	40,000					
189	Providence Irrigation District.	Calif.	Dear Creek.	9,500	20,000					
190	Utah Power & Light Co.	Utah.	Pole Creek and Uintah River.	2,435	2,435				Preliminary permit issued Mar. 17, 1922.	14
191	Little Rock Power & Water Co.	Calif.	Little Rock Creek.	475	2,300					

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower.		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (80 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
192	Johnson, C. B.	do.	(Transmission line)					Licenses issued July 19, 1921.		25
193	Los Angeles, City of.	do.	Baker and Big Pine Creeks.	6,880	12,000					
194	do.	do.	Rock Creek.	6,200	11,000					
195	do.	do.	Sawmill and Division Creeks.	2,300	4,000					
196	do.	do.	Cottonwood Creek.	6,800	12,000					
197	Shaner, H. S.	Mo.	Current River.	4,500	6,000	17	4,500	Rejected July 11, 1921.		
198	Boston & Montana Milling & Power Co.	Mont.	(Transmission line)					Licenses issued Sept. 15, 1921.		25
199	Columbia Railway & Navigation Co.	S. C.	Santee and Cooper Rivers.	2,000	8,000			Preliminary permit issued Sept. 14, 1921.		2
200	Rich Point Mining Co.	Calif.	Bear Creek.	330	350	249		Withdrawn May 2, 1922.		
201	Petersburg, Town of.	Alaska	Crystal Lake.	1,000	1,000			Preliminary permit issued Dec. 16, 1921.		2
202	Green River Power Co.	Utah	Green River.	911,600	1,200,000	158 } 165 } 279 }	158,500	Licenses issued July 19, 1921.	x	25
203	Michell, Thomas P.	Colo.	(Transmission line).							
204	Grangeville Electric Light & Power Co.	Idaho.	Clearwater River.	1,410	1,410					
205	Walthall, E. B.	Calif.	Kings River.	75,000	200,000	88 } 223 }	25,000	Withdrawn May 17, 1922.		
206	Georgia Inlet Packing Co.	Alaska	Beaver Falls Creek.	75	80	136		Licenses issued July 17, 1922.		5
207	Kelly Mines Co.	do.	Fishhook Creek and Little Susitna River.	2,760	4,000		2,700	Withdrawn Dec. 19, 1921.		
208	Los Angeles, City of.	Calif.	Aqueduct, South Fork Canyon Creek.	48,410	60,000					
209	Royal Development Co.	Wash.	Dryden-Chimunk Creek.	100	100					
210	Yosemite Power Co.	Calif.	South Fork Tuolumne River.	8,550	10,000			Withdrawn Aug. 28, 1921.		
211	Dryden-Harry W.	Ohio	Muskegon River.	400	400		550	Prelim. 1922 permit issued Apr. 28, 1922.		2
212	Hunt-Chicago Mining Co.	Alaska.	Head of Dickinson's Bay.							
213	Cann, J. H.	do.	Cann Creek.	60	75	129		Licenses issued Apr. 11, 1922.		25
214	Dixie Power Co.	Ark.	North Fork White River.	20,000	30,000			Preliminary permit issued July 6, 1922.		3
215	California Oregon Power Co.	Oreg.	Klamath River.	62,400	120,000					



216	The Original Mining & Milling Co.	Calif.	Merced River	875	875	875	Withdrawn Sept. 24, 1921.
217	Fletcher, Ed.	do.	Boulder Creek	1,300	760	1,300	
218	Saw Tooth Power Co.	Alaska	Krugman's River	40,000	33,120	40,000	
219	Griffith, Luther O.	Calif.	North Fork Feather River	1,970	1,970	249	
220	Colowyo Gold Mining Co.	Wyo.	Little Laramie River	1,000	1,000	149	
221	Clarke, John T.	Idaho	Big Horn River	1,300	1,300	1,300	Rejected Mar. 27, 1922.
222	Lewis River Hydro Electric Power Co.	Wash.	Lewis River	16,000	16,000	16,000	Rejected May 17, 1922.
223	Hawley, C. B.	W. Va.	New River	11,200	11,200	20,000	Preliminary permit issued Nov. 5, 1921.
224	Kotelna Power Construction Co.	Mont.	Kotelna and Yak Rivers	20,500	20,500	80,000	
225	Dixie Power Co.	Ariz.	Buffalo Fork (of White River)	8,000	15,000	15,000	
226	San Joaquin Light & Power Co.	Calif.	Bubbs Creek and Kings and Hume Rivers	97,000	200,000	200,000	50,000
227	Hiram James McKinnon, W. E., and Philip Young, Albert H.	do.	(Transmission line)				
228	Southern Power Co.	S. C.	do.	120,000	120,000	153,400	Withdrawn Oct. 3, 1921.
229	Washington Water Power Co.	Wash.	Columbia River	12,250,765 2,543,660	18,416,280 3,467,745	2,543,660	Preliminary permit issued July 28, 1922.
	Total to June 30, 1921 (excluding application numbers dropped)			9,707,105	14,948,535		
	Deduct—For conflicting projects and for applications withdrawn, canceled, or rejected						14
	Net total of active applications filed during previous fiscal year						
230	Grand, James B.	Ariz.	Colorado River	65,000	130,000	65,000	
231	do.	do.	do.	65,000	130,000	65,000	
232	St. Paul, City of	Minn.	Mississippi River	6,500	16,000		
233	Mount Shasta Power Corporation.	Calif.	Pit River	119,500	173,000		
234	Portland Railway, Light & Power Co.	Oreg.	Clackamas River	34,000	58,600		Preliminary permit issued Aug. 29, 1922.
235	Haynes-Stellite Co.	Idaho	Big Creek	250	350		
236	Blue Mountain Irrigation Co.	Utah	Pole Canyon Spring	40	40		
237	Excelsior Water & Mining Co.	Calif.	North and South Forks Yuba River	75,000	198,000	33,000	License issued Mar. 25, 1922.
238	Los Angeles, City of	Ariz.	Colorado River	596,000	800,000	596,000	
239	Northern States Power Co.	Minn.	Mississippi River	6,500	16,000	258	
240	Stone Consolidated Copper Co.	Ariz.	Bill Williams River	14,000	28,000	232	
241	Freshwater Bay Lumber Co., Inc.	Alaska	Small stream	100	100	242	6,500
242	Minneapolis, City of	Minn.	Mississippi River	6,500	16,000	232	License issued Mar. 20, 1922.
243	Dougherty, Frank C.	Alaska	Salmon Lakes	5,800	7,500	239	
244	do.	do.	Green and Baranof Lakes	20,000	25,000		Withdrawn Jan. 14, 1922.
245	Darwin Silver Co.	Calif.	(Transmission line)				do.
246	Dougherty, Frank C.	Alaska	Speel River	66,000	80,000	20,000	License issued Mar. 9, 1922.
247	Samson, W. H.	Calif.	Staunton Fork of Trinity River	15,000	25,000	4	Withdrawn Jan. 14, 1922.

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower.		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (90 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
248	Southern Sierras Power Co.	do.	Bear Creek and Santa Ana River.	5,000	25,000	73	5,000			
249	Jorgensen, Lars	do.	North Fork Feather River	200,000	350,000	156	2,320			
250	Northern States Power Co.	Minn.	Mississippi River	10,300	20,000	251,281		Preliminary permit issued June 26, 1922.		3
251	Harding, R. T.	Calif.	Buck and Grizzly Creeks	7,900	13,500	291				
252	Fletcher, Ed.	do.	Santa Ysabel River	1,800	3,600					
253	Weber, Henry	Colo.	Denny Creek	100	100			License issued Nov. 2, 1921.		25
255	Southern Sierras Power Co.	Calif.	(Transmission line).					License issued Nov. 19, 1921.		60
256	Terzich, Mitchell	do.	Eagle Creek	10	10					
257	Galvin, J. G.	Alaska	Aarons Creek	9,800	12,000			Preliminary permit issued July 17, 1922.		24
258	Southern California Edison Co.	Ariz.	Colorado River	900,000	1,200,000	59	355,000			
259	Fort Klamath Meadows Co.	Oreg.	Anna Creek	490	490	238		Preliminary permit authorized June 23, 1922.		14
260	San Joaquin Light & Power Corporation.	Calif.	Merced River	55,000	110,000	265				
261	Hughes, J. H.	Calif.	French Creek	2,160	4,000			Preliminary permit issued Apr. 26, 1922.		14
262	Hardaway, Benjamin H.	Ala.	Choctawhatchee River	850	5,000			Preliminary permit issued Apr. 12, 1922.		2
263	Barker, William, J.	Colo.	Grand River	52,000	85,000		52,000			
264	Northwestern Electric Co.	Wash.	North Fork Lewis River	19,400	28,000			Preliminary permit authorized May 17, 1922.		1
265	Mohler, Guy P.	Ariz.	Colorado River	316,800	400,000	258	316,800			
266	Hardaway, Benjamin H.	Ala.	Pea River	900	3,000			Preliminary permit issued Apr. 17, 1922.		2
267	Killebrew, A. E.	Ala.	Choctawhatchee River	1,200	5,000	276				
268	Osaloea, City of	Iowa	Des Moines River	400	2,700			Preliminary permit issued Mar. 28, 1922.		2
269	Wrangell, City of	Alaska	Mill Creek	500	500			Preliminary permit issued June 1, 1922.		2

270	Mendota Irrigation District. Co.	Calif.	Kings River	6,000	12,000			Preliminary permit issued Apr. 21, 1922.	3
271	Caddo River Power & Irrigation Co.	Ark.	Ouchita River	17,400	60,000				
272	Cooper, Hugh L.	Wash.	Columbia River	400,000	800,000			License issued July 17, 1922.	50
273	Karst, Peter F.	Mont.	Moose Creek	30	30				
274	Pacific Power & Light Co.	Oreg.	Deschutes River	27,200	54,000	142	27,200	Preliminary permit issued Aug. 26, 1922.	
275	Hutton, McNear & Dougherty	Alaska	Cascade Creek	25,700	34,000				
276	Houston Power Co.	Ala.	Choctawhatchee River	600	3,000	267	600		1½
277	Bureau Hydro Electric Co.	Mont.	Graves Creek	1,870	3,740			Canceled May 27, 1922, for lack of jurisdiction.	
278	Spirit Lake Railway & Power Co.	Wash.	Toutle and Green Rivers						
279	Utah Power & Light Co.	(Colo.)	Green and Yampa Rivers	504,500	800,000	202	438,000		
280	Wilson, Frank M.	Utah	Willer and Camp Creeks	70	70			License issued July 21, 1922.	50
281	California Oregon Power Co.	Calif.	(Transmission line)						
282	Idaho Power Co.	Oreg.	(Four transmission lines)					Preliminary permit authorized May 17, 1922	2
283	Brown, Edward T.	Idaho	Pitt Spring Run and Cub Run	130	130				
284	Mokelumne River Power & Water Co.	Calif.	Mokelumne River	5,900	12,000			Preliminary permit issued June 27, 1922.	2
285	St. Cloud Public Service Co.	Minn.	Mississippi River	4,600	6,000				
286	Maxfield, Earnheart, Maxfield & Ward.	Ark.	White River	500	1,200				
287	Illinois, State of	Ill.	Fox River	1,400	4,250			Preliminary permit issued Aug. 8, 1922.	2
288	Grants Pass Irrigation District	Oreg.	Rogue River	2,000	2,000				x
289	Louisville Gas & Electric Co.	Ky.	Ohio River	12,000	50,000	319			
290	Mays, James H., & Gandy, Harry L.	Utah	Huntington Creek	850	1,200				
291	Great Western Power Co.	Calif.	North Fork of Feather River	50,000	100,000	249,251	24,200	License issued July 26, 1922.	50
292	California Oregon Power Co.	do	(Transmission line)		600,000				
293	Pacific Power & Light Co.	Oreg.	Grande Ronde River	283,000	6,000	303	1,200		
294	Thomas, G. M.	Fla.	Chipola River	1,200	6,000			License issued June 26, 1922.	50
295	Black Mountain Telephone Corp.	N. C.	(Transmission line)						
296	Mineral County Light & Power Lines.	Nev.	do						
297	Willow Creek Mines	Alaska	Craigie Creek	250	650				
298	Southern California Edison Co.	Calif.	Kaweah River	4,860	9,960			License authorized March 17, 1922.	50
299	Smith-Sanders Power Co.	Tenn.	Hodson River	1,000	2,000				
300	Thebo, Starr & Anderton, Inc.	Calif.	McCloud and Pitt Rivers	127,000	180,000				
301	Stannard, Clare N.	Calif.	Grand River	52,000	57,000				
302	White Rapids Paper Co.	Mich.	Menominee River					Canceled June 23, 1922, for lack of jurisdiction.	
303	Hardaway, Benjamin H.	Fla.	Chipola River	1,760	6,000				
304	Winchester Water Works Co.	Ky.	Kentucky River	250	250			License issued July 26, 1922.	50
305	Eye, C. M.	Calif.	(Transmission line)						
306	Wittman, Joseph	Ariz.	Hassayampa River	2,750	5,500				
307	Thebo, Starr & Anderton, Inc.	Calif.	American River	250,000	500,000				
308	Enterprise Electric Co.	Oreg.	East Fork of Willows River	1,400	1,500				x
309	Clarion River Power Co.	Pa.	Clarion River	1,250	44,000				

## List of applications filed with the Federal Power Commission—Continued.

NOTE.—The numbers omitted from left-hand column relate to applications which were withdrawn, rejected, or canceled prior to the beginning of the present fiscal year.

No.	Name of applicant.	State.	Stream.	Horsepower.		Conflict, rejection, cancellation or withdrawal.		Final action taken.	Miscellaneous.	
				Primary (90 per cent of time).	Estimated installed capacity.	Conflict with project.	Extent in primary power.		Valuation required.	Period in years.
310	Northern States Power Co. ....	Minn.	St. Croix River.....	11,009	22,000	28	.....	.....	.....	.....
311	Bryan, F. A. ....	Wis.	St. Joseph River.....	1,700	7,600	.....	.....	.....	.....	.....
312	Molydenum Co. of America, .....	Mich.	Red River and Columbine Creek.....	900	1,350	.....	.....	.....	.....	.....
313	Murtaugh Irrigation District.....	Idaho.	Snake River.....	11,000	15,000	.....	.....	.....	.....	.....
314	Mutual Power Association.....	do	Crane Creek.....	2,800	5,000	.....	.....	.....	.....	.....
315	Carolina Power & Textile Co. ....	N. C.	Mills and Davidson Rivers.....	6,000	10,000	.....	.....	.....	.....	.....
316	Clarton River Power Co. ....	Pa.	Clarton River.....	44,250	135,000	.....	.....	.....	.....	.....
317	do.....	do	do.....	24,000	100,000	.....	.....	.....	.....	.....
318	American Super-Power Corp. ....	N. Y.	Niagara River.....	360,000	450,000	.....	.....	.....	.....	.....
319	Louisville, City of.....	Ky.	Ohio river.....	12,000	50,000	289	12,000	.....	.....	.....
320	Nevada-California Power Co. ....	Calif.	Bishop Creek.....	1,450	18,750	.....	.....	.....	.....	.....
321	Colorado Power Co. ....	Colo.	(Four transmission lines).....	.....	.....	.....	.....	.....	.....	.....
	Total, fiscal year ended June 30, 1922.....			4,945,480	8,152,660	.....	2,127,120	.....	3	.....
	Deduct for conflicts, rejections and withdrawals made for fiscal year 1922.....			2,127,120	3,102,250	.....	.....	.....	.....	.....
	Net total for fiscal year 1922.....			2,818,360	5,050,410	.....	.....	.....	17	.....
	Total active applications filed during previous years.....			9,707,105	14,948,535	.....	.....	.....	.....	.....
	Total active applications Add deductions for 1922.....			12,525,465	19,998,945	.....	.....	.....	.....	.....
	Add deductions for application numbers dropped.....			4,670,780	6,569,995	.....	.....	.....	.....	.....
	Total of all applications to June 30, 1922.....			3,312,650	4,134,300	.....	.....	.....	.....	.....
				20,508,995	30,703,240	.....	.....	.....	.....	.....

## APPENDIX F.

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### PERMITS AND LICENSES ISSUED UNDER THE FEDERAL WATER POWER ACT DURING THE FISCAL YEAR ENDED JUNE 30, 1922, THE PARTIES THERETO, AND THE TERMS PRESCRIBED—MONEYS RECEIVED DURING THE FISCAL YEAR 1922.

#### PRELIMINARY PERMITS.

##### PROJECT No. 52—ALABAMA.

*Permit issued* October 1, 1921, for one and one-half years.

*Permittee:* City of Dothan, Ala.

*Location of project:* Choctawhatchee River at Chalkers Bluff, Geneva County, Ala.

*Description of project:* A concrete and earth dam 40 feet high at Chalkers Bluff; power house near east end of dam; power capacity 1,265 horsepower; installed capacity 7,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Plans to have suitable provisions for future construction of lock. In such event the permittee will be required to provide for protection of navigation, subject to approval of the Chief of Engineers and Secretary of War. Unless a smaller amount be authorized by the Secretary of War, permittee to allow a minimum discharge past the dam of 750 cubic feet per second at all times except when the natural discharge at the dam is less than that amount, when the discharge shall not be less than the natural discharge. The permittee shall make a reasonable increase or decrease in the proposed height of its dam should the full practicable utilization of the stream and the interests of navigation so require.

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##### PROJECT No. 262—ALABAMA.

*Permit issued* April 12, 1922, for two years.

*Permittee:* Benjamin H. Hardaway, Columbus, Ga.

*Location of project:* Choctawhatchee River near Geneva, Ala.

*Description of project:* A dam approximately 25 feet high, causing backwater approximately to the proposed Chalkers Bluff Dam of the city of Dothan; power capacity, 850 horsepower; installed capacity, 5,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Unless a smaller amount be authorized by the Secretary of War, permittee to allow a minimum discharge past the dam of 750 cubic feet per second at all times except when the natural discharge at the dam is less than that amount, when the discharge shall not be less than the natural discharge. When the United States provides for navigation in the river above this proposed dam, the maximum allowable drawdown of the pool shall not exceed 4 feet unless otherwise authorized by the Secretary of War. The licensee shall provide in his plans for the construction by the United States at some future date of a lock and appurtenant

navigation facilities, transfer without cost to the United States the necessary lands and rights of way for such construction, and furnish free of cost the electric power required for operation of such lock when constructed.

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PROJECT No. 286—ALABAMA.

*Permit issued* April 12, 1922, for two years.

*Permittee:* Benjamin H. Hardaway, Columbus, Ga.

*Location of project:* Pea River, Geneva County, Ala., Walton and Holmes Counties, Fla.

*Description of project:* A dam approximately 40 feet high about 4 miles above Geneva, Ala., and a power house at the dam, or a diversion canal from said dam to the pool of permittee's proposed project at Chalkers Bluff, Choctaw-hatchee River; power capacity, 800 horsepower; installed capacity, 3,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to make necessary engineering investigations and construct project works so as to make full economic use of power possibilities of the site; to determine the stage and available flow of Pea River; unless smaller amount be authorized by the Secretary of War, to allow a minimum discharge past the dam of not less than 750 cubic feet per second, except when the natural discharge of the river at the dam site is less than said amount, when a discharge of not less than the natural discharge shall be permitted. If the flow of Pea River is diverted to the Choctaw-hatchee River, unless a smaller amount be authorized by the Secretary of War, permittee to allow a discharge past the dam of not less than 1,500 cubic feet per second, except when the combined natural discharge of the two rivers at the dam site is less than this amount, when a discharge not less than said combined natural discharge shall be permitted; permittee to submit accurate record of all expenditures made under permit.

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PROJECT No. 61—ALASKA.

*Permit issued* May 6, 1922, for two years.

*Permittee:* Wrangell Pulp & Paper Co., Alaska.

*Location of project:* Harding Creek and Grant Creek (both tributary to Bradfield Canal from the north), Tongass National Forest, Alaska.

*Description of project:* A dam in Harding Creek and in Grant Creek; a power house between the reservoirs formed and Bradfield Canal; power capacity, 1,280 horsepower; installed capacity, 3,000 horsepower. Public land in the project area, 640 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee shall investigate the stream flow of Harding and Grant Creeks and submit accurate record of all expenditures made under permit. The project works shall make full practicable utilization of power possibilities of the site.

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PROJECT No. 119—ALASKA.

*Permit issued* May 29, 1922, for two years.

*Permittee:* Frank L. Ballaine, 424 Alaska Building, Seattle, Wash.

*Location of project:* Kenai River, Kenai precinct and recording district, Alaska.

*Description of project:* Rock-fill dam approximately 120 feet high; a short tunnel and power house on Kenai River, about 11 miles below Kenai Lake. Transmission line from power house to Seward; power capacity, 5,500 horsepower; installed capacity 15,000 horsepower. Public land in project area, 12,320 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee will investigate and determine the flow of Kenai River, make full practicable utilization of power possibilities at site to be developed, and submit accurate record of all expenditures made under permit.

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PROJECT No. 138—ALASKA.

*Permit issued* November 23, 1921, for two years.

*Permittee:* George C. Hazelet, Cordova, Alaska.

*Location of project:* Duck River, Valdez, Chugach National Forest, Alaska.

*Description of project:* Dam at outlet of Silver Lake; power house approximately 7,000 feet below dam; power capacity, 720 horsepower; installed capacity, 15,000 horsepower. Public land in the project area, 1,440 acres.

*Terms prescribed:* License, if issued, to be for 50 years. The permittee shall determine the flow of Duck River and keep accurate and sufficient records of such flow throughout life of permit; make full practicable utilization of power possibilities of site; and submit accurate record of expenditures made under permit.

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PROJECT No. 157—ALASKA.

*Permit issued* June 26, 1922, for two years.

*Permittee:* Alaska Development & Mineral Co., New York, N. Y.

*Location of project:* Tyee and Anan Creeks, Tongass National Forest, Alaska.

*Description of project:* A 100-foot dam at outlet of Tyee Lake; a 9,000-foot tunnel to power house on Bradfield Canal; a 60-foot dam about 1,300 feet above mouth of Anan Creek forming a 300-acre reservoir; a 1,600-foot pipe line to power house on Humpback Bay, Bradfield Canal; an 18-mile transmission line connecting the two power houses; power capacity 18,200 horsepower; installed capacity 28,000 horsepower; public land in the project area 2,380 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine stages and available flow of Tyee and Anan Creeks; to make such engineering investigations and design of project works so that a full practicable utilization of power of the site will entail.

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PROJECT No. 160—ALASKA.

*Permit issued* May 11, 1922, for two years.

*Permittee:* Alaska Public Utilities, Cordova, Alaska.

*Location of project:* Power Creek near Cordova, Alaska.

*Description of project:* Dam about 4 miles from Cordova; a power house about  $1\frac{1}{2}$  miles below dam; power capacity, 1,000 horsepower; installed capacity, 1,500 horsepower. Public lands in project area, 640 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine the stage and available flow of Power Creek; to make such engineering investigations that plans submitted for project works will make full economic use of power possibilities of the site; and to submit accurate and dependable record of all expenditures made under permit.

## PROJECT No. 201—ALASKA.

*Permit issued* December 16, 1921, for two years.

*Permittee:* Town of Petersburg, Alaska.

*Location of project:* Near Petersburg, Mitkof Island, Alaska.

*Description of project:* A tunnel and pipe-line conduit from Crystal Lake approximately 3,100 feet westerly to power house; power capacity, 1,000 horsepower; installed capacity, 1,000 horsepower. Public lands in project area, 295 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine stream flow at outlet of Crystal Lake and the variations in the level of the lake during period of the permit; to make necessary engineering investigations and so design project works as to make full economic use of power possibilities of the site; and to submit accurate record of all expenditures made under permit.

## PROJECT No. 212—ALASKA.

*Permit issued* April 28, 1922, for two years.

*Permittee:* Hirst Chichagof Mining Co., Seattle, Wash.

*Location of project:* Near Chichagof Island, Tongass National Forest, Alaska.

*Description of project:* Dam approximately 100 feet high across an unnamed creek tributary to the head of Didrickson Bay, creating a reservoir of approximately 1,560 acre-feet; power house located approximately 1,600 feet below dam; power capacity, 400 horsepower; installed capacity, 400 horsepower. Public lands in project area, 213 acres.

*Terms prescribed:* Permittee to make such necessary engineering investigations as will enable the designing of project works which will make full practicable utilization of the power possibilities of site, and to submit accurate record of all expenditures made under permit.

## PROJECT No. 269—ALASKA.

*Permit issued* June 1, 1922, for two years.

*Permittee:* City of Wrangell, Alaska.

*Location of project:* Mill Creek, Tongass National Forest, Alaska.

*Description of project:* Dam on Mill Creek at outlet of Virginia Lake; power house at tidewater on shore of Eastern Passage; power capacity, 500 horsepower; installed capacity, 500 horsepower. Public land in project area, 150 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to permit of a fuller development of Mill Creek power possibilities when necessary, to submit records of expenditures made under permit prior to issuance of license, and to make such engineering investigations as will enable the project works to be designed so as to make full economic use of power available at site.

## PROJECT No. 121—ARIZONA.

*Permit issued* July 19, 1921, for one and one-fourth years.

*Permittee:* James B. Girand, Phoenix, Ariz.

*Location of project:* In Colorado River near Diamond Creek, Mohave and Coconino Counties, Ariz., and the Hualapai Indian Reservation.



*Description of project:* A masonry dam approximately 250 feet high, causing backwater about 25 miles upstream; power house located immediately below the dam; power capacity 60,000 horsepower; installed capacity 120,000 horsepower.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine stage and flow of Colorado River; to make necessary investigations and so design project works as to make full economic use of power possibilities of the site, and to submit accurate record of all expenditures made under permit.

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PROJECT No. 271—ARKANSAS.

*Permit issued* April 21, 1922, for three years.

*Permittee:* Caddo River Power & Irrigation Co., Little Rock, Ark.

*Location of project:* Ouachita River, Garland County, Ark.

*Description of project:* Three dams located in Ouachita River, Garland County, Ark., affecting the stream from approximately 1 mile below its confluence with High Springs Creek to a distance of 25 miles upstream; power capacity 27,200 horsepower; installed capacity 50,000 horsepower. Public lands in project area, 11,098 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Operation of project works must not interfere unreasonably with interests of navigation lower down the river, if license is issued. Permittee to so design project works as to make full economic use of power possibilities of the site and to submit accurate record of expenditures made under permit.

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PROJECT No. 32—CALIFORNIA.

*Permit issued* August 24, 1921, for one and one-half years.

*Permittee:* R. W. Hawley, 833 Market Street, San Francisco, Calif.

*Location of project:* Silver Creek and South Fork of Silver Creek, Eldorado County, Eldorado National Forest, Calif.

*Description of project:* A multiple-arch dam across South Fork of Silver Creek creating a 20,000-acre-foot reservoir; power house No. 1, 6 miles northwesterly from dam and a 100 cubic feet per second conduit connecting the two. A concrete multiple-arch dam across Silver Creek creating a 50,000-acre-foot reservoir; a 250 cubic feet per second conduit  $6\frac{1}{2}$  miles westerly to power house No. 2; a single-arch diversion dam below power house No. 2 and a 350 cubic feet per second conduit southwesterly 8 miles to power house No. 3; power capacity 44,680 horsepower; installed capacity 75,000 horsepower. Public lands in project area, 5,480 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to make necessary engineering investigations; to make full practicable utilization of power possibilities of the site; determine the stage and available flow of Silver Creek; and to submit accurate record of expenditures made under permit.

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PROJECT No. 75—CALIFORNIA.

*Permit issued* June 15, 1922, for two years.

*Permittee:* R. G. McDonald, Williams, Colusa County, Calif.

*Location of project:* Convict Creek and vicinity, Mono County, Calif.

*Description of project:* A 23-foot dam at outlet of Lake Dorothy; conduit from dam to Lake McDonald; a 25-foot dam at outlet of Lake McDonald; a 41-foot dam at outlet of Lake Genevieve; conduits from Lake McDonald and Lake Genevieve to power house No. 1 located on Convict Creek; a diversion dam across Convict Creek immediately below power house No. 1 with conduit from it to power house No. 2 near head of Convict Lake; power capacity, 2,000 horsepower; installed capacity, 6,250 horsepower. Public lands in project area, 1,000 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine available flow of Convict Creek; to make necessary engineering investigations and so design project works as to make full practicable utilization of the power possibilities of the site (license to be issued for construction and operation of necessary works solely for the purpose of generating power); to operate storage works in connection with project works authorized under license in such manner that no harmful interference will result to the storage and use of waters of Owens River under vested rights, and in the event of claim of such harmful interference being set up by the owners of said vested rights, permittee to modify the methods of operation in accordance with such rules as may be laid down by the division of water rights, State department of public works or Federal Power Commission, or both. Permittee to submit accurate record of expenditures made under permit.

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PROJECT NO. 88—CALIFORNIA.

*Permit issued* July 19, 1921, for two years.

*Permittee:* Merced irrigation district, Merced, Calif.

*Location of project:* Merced River, Mariposa County, Calif.

*Description of project:* A masonry arched dam approximately 320 feet high, with power house located at the dam. This power project to be an adjunct to the irrigation system of Merced irrigation district. Power capacity, 10,000 horsepower; installed capacity, 20,000 horsepower. Public lands in project area, 2,800 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to submit such plans and information relative to the irrigation system as may be necessary to inform the Commission fully as to the plan of utilization of the water; to determine the relation between normal flow at the Crocker-Hoffman Canal intake and a point in the stream above backwater of the proposed reservoir, and to submit accurate record of all expenditures made under permit.

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PROJECT NO. 261—CALIFORNIA.

*Permit issued* April 26, 1922, for one and one-half years.

*Permittee:* John H. Hughes, Sharon Building, 55 New Montgomery Street, San Francisco, Calif.

*Location of project:* French Creek, Butte County, Plumas National Forest, Calif.

*Description of project:* A diversion dam and power house approximately 1 mile downstream; power capacity, 2,160 horsepower; installed capacity, 4,000 horsepower. Public lands in project area, 601 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to investigate stream flow of river, to make engineering investigations and so design project works as to make full practicable use of power possibilities of the site, and to submit accurate record of all expenditures made under permit.

## PROJECT No. 163—COLORADO.

*Permit issued* March 14, 1922, for two years.

*Permittees:* James F. Myser and Edward E. Drach, 1133 Clarkson Street, Denver, Colo.

*Location of project:* Fryingpan Creek, Pitkin and Eagle Counties, Colo.

*Description of project:* A series of 5 power developments along Fryingpan Creek consisting principally of 9 dams, 9 conduits, and 5 power houses; power capacity, 50,000 horsepower; installed capacity, 100,000 horsepower. Public lands in the project area, 6,210 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine the flow of stream, to make engineering investigations, and so design project works as to make full practicable utilization of power possibilities at the site, and to submit accurate record of all expenditures made under permit.

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## PROJECT No. 173—CONNECTICUT-MASSACHUSETTS.

*Permit issued* November 10, 1922, for two years.

*Permittee:* Connecticut River Co., Windsor Locks, Conn.

*Location of project:* Connecticut River at Warehouse Point or Kings Island, Conn.

*Description of project:* Dam at the foot of Enfield Rapids or Kings Island; power house at the dam; power capacity, 20,000 horsepower; installed capacity, 20,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to include in plans of the project works a new lock and navigable approaches thereto as approved by the Chief of Engineers and Secretary of War; to design dam so that lock may be built whenever required; to include such adjacent portions of the lock as in the opinion of the Chief of Engineers are required to properly facilitate its eventual completion; to make special study of all stream gauge and stream flow records on the Connecticut, Chicopee, and Westfield Rivers so that project works may be designed to make full economic use of power possibilities at site without undue interference with other interests; and to submit accurate record of all expenditures made under permit.

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## PROJECT No. 55—FLORIDA AND ALABAMA.

*Permit issued* October 12, 1921, for two years.

*Permittee:* A. Reed Bingham, box 228, Pensacola, Fla.

*Location of project:* On Perdido, Styx, and Blackwater Rivers, Escambia County, Fla., and Baldwin County, Ala.

*Description of project:* Three dams, 13½, 13, and 17 feet high, respectively, in the Perdido River; the lower dam just north of the floor of the base line; the upper dam about 10 miles above this; a 25-foot dam in Styx River approximately 3 miles from its mouth; a dam 21.5 feet high in Blackwater River approximately 3 miles from its mouth; power capacity, 5,120 horsepower; installed capacity, 10,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to design the project works with provision for future construction of locks without interfering with continuous operation of project, and in such event to provide for protection of navigation as approved by the Chief of Engineers and the Secretary of War.

## PROJECT No. 177—FLORIDA.

*Permit issued* December 28, 1921, for three years.

*Permittee:* Ocklawaha Reclamation Farms, Ocala, Fla.

*Location of project:* Moss Bluff, Ocklawaha River, Marion County, Fla.

*Description of project:* A power house to be located at a proposed Government lock and dam to be built on the Ocklawaha River at Moss Bluff; power capacity, 500 horsepower; installed capacity, 1,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to furnish free of cost to the United States power for operation of navigation facilities at the dam, including lights and signals, the United States retaining the right to use sufficient water for the purposes of navigation as may be determined by the Secretary of War; to determine available flow of the stream; and to submit accurate record of all expenditures made under permit.

## PROJECT No. 20—IDAHO.

*Permit issued* July 19, 1921, for one and three-fourths years.

*Permittee:* Utah Power & Light Co., Salt Lake City, Utah.

*Location of project:* Bear River in Bannock, Caribou and Franklin Counties, Idaho.

*Description of project:* Five dams affecting Bear River approximately between Soda Point and Mink Creek; a power house located at each dam; power capacity 21,500 horsepower; installed capacity 50,000 horsepower. Public lands in project area, 1,922 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine the stage and available flow of Bear River, to make necessary investigations and so design project works as to make full practicable utilization of power possibilities of the sites and to submit accurate record of all expenditures made under permit.

## PROJECT No. 154—IDAHO.

*Permit issued* June 31, 1922, for two years.

*Permittee:* Elmore Copper Co., Mountain Home, Idaho.

*Location of project:* South Fork of Boise River, Elmore County, Idaho.

*Description of project:* A dam 50 to 90 feet high on the South Fork of Boise River above mouth of Dixie Creek, forming a reservoir extending upstream approximately 3 miles; power house located at the dam; power capacity 6,000 horsepower; installed capacity 6,000 horsepower. Public lands in project area, 1,350 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Regulation of discharge from the reservoir is reserved by the United States for the protection of irrigation interests. Permittee will make necessary engineering investigations and so design project works as to make full practicable utilization of power possibilities of the site, and will submit accurate record of all expenditures made under permit.

## PROJECT No. 159—IDAHO.

*Permit issued* May 12, 1922, for one and one-half years.

*Permittee:* City of Boise, Idaho.

*Location of project:* North and South Forks of Payette River, Boise and Gem Counties, Idaho.

*Description of project:* Two dams 75 and 50 feet high on North and South Forks of Payette River, respectively. Power house located on South Fork of Payette River approximately 4,100 feet below the dam. Power capacity 11,950 horsepower; installed capacity 30,000 horsepower. Public lands in project area, 1,350 acres.

*Terms prescribed:* License, if issued, to be for 50 years, and may contain a special provision reserving to the United States the right to regulate discharge from the reservoir to the extent necessary to protect irrigation rights on the lower river. Permittee to make necessary engineering investigations and so design project works as to make full practicable utilization of power possibilities of the site, to determine the stage and available flow of the streams, and to submit accurate record of all expenditures made under permit.

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#### PROJECT No. 48.—ILLINOIS.

*Permit issued* January 14, 1922, for three years.

*Permittee:* State of Illinois.

*Location of project:* Des Plaines River and Illinois River in Will, Grundy, and La Salle Counties, Ill.

*Description of project:* A dam and power house on Des Plaines River and three dams and power houses on Illinois River, together with locks and necessary navigation structures. Power capacity, 41,450 horsepower; installed capacity, 50,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years, and shall be without prejudice to the use by the State of Illinois of surplus flow in excess of navigation needs in the Des Plaines and Illinois Rivers whenever such surplus flow exists, but not construed as authority for the diversion of water from Lake Michigan in excess of reasonable needs of navigation in Illinois River. Permittee shall maintain water levels above and below any lock in accordance with such rules and regulations for the protection of navigation as are prescribed by the Secretary of War and submit accurate record of all expenditures made under permit.

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#### PROJECT No. 268.—IOWA.

*Permit issued* March 28, 1922, for two years.

*Permittee:* City of Oskaloosa, Iowa.

*Location of project:* Des Moines River, Marion County, Iowa.

*Description of project:* A dam located about 800 feet above the Chicago, Rock Island & Pacific Railroad bridge; a levee 2 miles upstream from the dam along the west bank of the river, and a dam with flood gates across the head of the old river channel which by-passes the proposed power dam; power house located at the dam; power capacity, 400 horsepower; installed capacity, 2,700 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. The project works shall be so operated as not to interfere unreasonably with interests of navigation or power development in the river below; permittee shall transfer without cost to the United States the necessary lands and right of way for subsequent navigation improvement construction; shall furnish free of cost electric power required for operation of lock when constructed; shall make necessary engineer-

ing investigations and design project works to make full practicable utilization of the power possibilities of site; and shall submit accurate record of all expenditures made under permit.

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PROJECT No. 172—LOUISIANA.

*Permit issued* January 4, 1922, for one and one-fourth years.

*Permittee:* Louisiana Gravity Canal Co., New Orleans, La.

*Location of project:* Bayou Cocodrie, Calcasieu River, Whiskey Chitto Creek, Bayou Nezpieque, and Bayou Cortabreau, in Rapides, Evangeline, St. Landry, Acadia, Allen, Jefferson Davis, Beauregard, and Calcasieu Parishes, La.

*Description of project:* A combination irrigation and power development involving Cocodrie, Calcasieu, and Whiskey Chitto Reservoirs; a combined system of distribution irrigation canals and five power plants located at the outlet of Calcasieu Reservoir, the outlet of Cocodrie Reservoir, at Jones Bluff on the Calcasieu River, at Chaumonts Ferry, on Bayou Nezpieque, on Bayou Cocodrie, and on Bayou Cortabreau below the junction of Bayou Cocodrie and Bayou Boeuf, respectively. Power capacity, 40,000 horsepower; installed capacity, 55,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years, to contain provisions imposed for reservoir construction already granted by the War Department, and to safeguard navigation interests on the lower reaches of each of the streams involved. Permittee to determine the stage and available flow of Bayou Cocodrie, Calcasieu River, and Whiskey Chitto Creek at each of the proposed reservoirs, and to submit accurate record of all expenditures made under permit.

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PROJECT No. 250—MINNESOTA.

*Permit issued* June 26, 1922, for three years.

*Permittee:* Northern States Power Co., Minneapolis, Minn.

*Location of project:* Mississippi River, near Otsego and Monticello, in Sherburne and Wright Counties, Minn.

*Description of project:* Two dams in Mississippi River; a power house located at each dam; power capacity, 10,300 horsepower; installed capacity, 20,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to make necessary engineering investigations and design project works so as to make full practicable use of power possibilities available at the sites; to make further study of the Otsego site, with a view to developing all of the head between it and the Monticello site; to provide in the plans of the project works for future construction of navigation facilities, in accordance with instructions from the United States district engineer at St. Paul, Minn.; and to submit accurate record of all expenditures made under the permit.

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PROJECT No. 285—MINNESOTA.

*Permit issued* June 27, 1922, for two years.

*Permittee:* St. Cloud Public Service Co., St. Cloud, Minn.

*Location of project:* Mississippi River, near Clearwater, Stearns, and Sherburne Counties, Minn.

*Description of project:* Power house located at the dam; power capacity, 4,000 horsepower; installed capacity, 6,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to provide in the plans for future construction by the United States of navigation facilities, their general dimensions to be in accordance with instructions from the United States district engineer at St. Paul, Minn.; and to submit accurate record of all expenditures made under the permit.

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PROJECT No. 17—MISSOURI.

*Permit issued* August 24, 1921, for two years.

*Permittee:* Western Tie & Timber Co., St. Louis, Mo.

*Location of project:* Current River, Shannon County, Mo.

*Description of project:* A dam approximately 50 feet high; power house located at dam; power capacity, 4,000 horsepower; installed capacity, 15,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to make necessary engineering investigations and so design project works as to make full practicable utilization of power possibilities of the site; to provide and operate free of cost to navigation interests means for transporting ties, logs, and lumber rafts past the dam; to install and operate at own expense some suitable appliance for passing boats, not exceeding 4 tons in weight, past the dam at the request of operators of said boats; unless otherwise authorized by the Secretary of War, to allow a discharge past the dam of not less than 80 cubic feet per second between the hours of 8 p. m. and 5 a. m., and not less than 225 cubic feet per second between the hours of 5 a. m. and 8 p. m.; to be subject to control by such reasonable rules and regulations in interests of navigation as shall be prescribed by the Secretary of War; and to submit accurate record of all expenditures made under permit.

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PROJECT No. 21—MISSOURI.

*Permit issued* March 9, 1922, for two years.

*Permittee:* W. R. Banks, Lamar, Mo.

*Location of project:* Osage River, Benton, Morgan, Camden, and Miller Counties, Mo.

*Description of project:* A dam 30 to 40 feet high near mouth of Niangua River; a diversion tunnel approximately 8,000 feet long; power house located at outlet of tunnel; a 15 to 18 foot dam in Osage River at some point above outlet of above-mentioned tunnel; power house to be located at the dam; a dam 25 to 30 feet high immediately below mouth of Big Tavern Creek or near Devils Elbow; power house to be located at the dam; power capacity, 4,000 horsepower; installed capacity, 4,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to determine the stage and available flow of Osage River; to make necessary engineering investigations without unreasonably obstructing the river channel; to construct and operate project works so that low water depths now existing in the Osage River below Warsaw, Mo., shall not be decreased; to make plans for a lock and appurtenant navigation structures in each of the proposed dams, the locks to be of dimensions similar to those in United States Government lock at Mile 7; and to submit accurate record of expenditures made under permit.

## PROJECT No. 12—MONTANA AND WYOMING.

*Permit issued* June 28, 1922, for three years.

*Permittee:* The Big Horn Canyon Irrigation & Power Co., Hardin, Mont.

*Location of project:* Big Horn River, Carbon and Big Horn Counties, Mont.

*Description of project:* An arched gravity concrete dam approximately 490 feet high, causing backwater approximately 40 miles upstream; power house located at dam; power capacity, 97,070 horsepower; installed capacity, 210,000 horsepower. Public lands in the project area, 28,703 acres.

*Terms prescribed:* License, if issued, to be for 50 years, and shall not be construed as affecting in any way any priority to the waters of the Big Horn River or of its tributaries in respect to the Shoshone project of the United States Reclamation Service, or as waiving any rights which the United States might have in respect thereto. Permittee is to make necessary engineering investigation and so design project works as to make full economic use of power possibilities of the site; and to submit accurate record of all expenditures made under the permit.

## PROJECT No. 81—NORTH CAROLINA.

*Permit issued* July 19, 1921, for one year.

*Permittee:* Granite Falls Manufacturing Co., Hickory, N. C.

*Location of project:* Wilson Creek, Caldwell County, Boone National Forest, N. C.

*Description of project:* One or more dams and power houses affecting Wilson Creek approximately between Mile 125 and Mile 127½ of the Carolina & Northwestern Railway; power capacity 2,640 horsepower; installed capacity 51,000 horsepower. Public lands in project area, 4 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to make necessary investigations and so design project works as to make full practicable utilization of power possibilities at the site; to determine the flow of Wilson Creek; and to submit accurate record of all expenditures made under permit.

## PROJECT No. 143—OREGON.

*Permit issued* May 25, 1922, for one year.

*Permittees:* S. A. Mushen and G. D. Cronemiller, Lakeview, Oreg.

*Location of project:* Deep and Camas Creeks, Lake County, Oreg.

*Description of project:* Two small dams, respectively, in Camas and Deep Creeks, and a power house located at their junction. A small dam across Deep Creek just below the power house, and a second power house located near mouth of Drake Creek; power capacity, 230 horsepower; installed capacity, 800 horsepower. Public lands in project area, 6,415 acres.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to abide by whatever conditions the Commission may prescribe governing the operation of the licensees' reservoirs in the interest of fullest practicable utilization of the water resources of the region when a more complete development is undertaken; to make such low-water measurements as may be necessary to determine the relation of the flow at each of the proposed intakes for the project to that of the stream below the power house near the mouth of Drake Creek; to so design project works as to make full economic use of the power possibilities of the site; and to submit accurate record of all expenditures made under permit.



## PROJECT No. 189—SOUTH CAROLINA.

*Permit issued* September 14, 1921, for two years.

*Permittee:* Columbia Railway & Navigation Co., Columbia, S. C.

*Location of project:* Cooper River, near Moncks Corner, in Berkeley County, S. C.

*Description of project:* A navigable canal 24 miles long, not less than 10 feet deep, and sufficiently wide to carry any water authorized for diversion from Santee River through the canal, beginning at a point on the Santee River near Ferguson, Orangeburg County, and terminating at the headwaters of Cooper River, near Moncks Corner, Berkeley County. Power plant to be located near the southerly terminus of the canal; power capacity, 2,000 horsepower; installed capacity, 8,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. The permittee to collect data and make surveys necessary to aid the district engineer in determining the amount of diversion permissible near Ferguson without detriment to navigation in the Santee River below that point; to make a special study to determine the effect on the economic operations of the project in case of restrictions on diversions from the Santee River; to make a study of storage possibilities along the route of its proposed canal; to make surveys of the valley of the Cooper River and such studies of the water of the Santee River as will show clearly the effect of said project on the upper Cooper River Valley and on Charleston Harbor, as regards flooding of the former or silting of the latter; and to submit accurate record of all expenditures made under the permit.

## PROJECT No. 113—UTAH.

*Permit issued* July 19, 1921, for two years.

*Permittee:* Great Basin Power Co., Salt Lake City, Utah.

*Location of project:* Wolf Creek and North and West Forks of Duchesne River, Wasatch County, Utah.

*Description of project:* A diversion dam in Wolf Creek and West Fork of Duchesne River, respectively; a dam and reservoir in North Fork of Duchesne River; power house located near confluence of West Fork with Duchesne River; power capacity, 3,950 horsepower; installed capacity, 10,000 horsepower. Public lands in project area, 3,153 acres.

*Terms prescribed:* Permittee to determine the flow of the three streams; to make a study of and report on the amount of power available from the project, of the market to be supplied, and of generating capacity which should be economically installed to meet the requirements of such market; and to submit accurate record of all expenditures made under permit.

## PROJECT No. 190—UTAH.

*Permit issued* March 17, 1922, for one and one-fourth years.

*Permittee:* Uintah Power & Light Co., Myton, Utah.

*Location of project:* Spring Branch and Uinta River, Duchesne County, Utah (Ashley National Forest).

*Description of project:* Diversion dams in Spring Branch and Uinta River; a conduit leading from Spring Branch Dam to Uinta River Dam, thence to power house, approximately 5 miles southeasterly; power capacity, 2,425 horsepower; installed capacity, 2,425 horsepower. Public lands in the project area, 3,800 acres.

*Terms prescribed:* License, if issued, to be for a period of 50 years. Permittee to determine the stage and average flow of Spring Branch and Uinta River, to make necessary engineering investigations and so design project works as to make full economic use of power possibilities of the site, to permit the use of the reservoir in Uinta River for transportation of forest products, and to keep accurate record of all expenditures made under the permit.

PROJECT No. 223—WEST VIRGINIA.

*Permit issued* November 5, 1921, for two years.

*Permittee:* Charles B. Hawley, 450 Munsey Building, Washington, D. C.

*Location of project:* Near Sandstone Falls in New River, Raleigh and Summers Counties, W. Va.

*Description of project:* A low diversion dam just above Sandstone Falls; power house at the dam; power capacity, 11,200 horsepower; installed capacity, 20,000 horsepower. No public lands.

*Terms prescribed:* License, if issued, to be for 50 years. Permittee to operate the plant so as not to interfere unreasonably with navigation or with the operation of other power plants below, to make necessary engineering investigations and so design project works as to make full economic use of the power possibilities of the site, and to submit accurate record of all expenditures made under the permit.

LICENSES FOR MAJOR PROJECTS.

All licenses for major projects are issued subject to the rules and regulations of the Commission and to the provisions of the Federal Water Power Act. In general only such prescribed terms are set forth in the license as are required by the act to be expressed in the license, or are necessary to make clear the application of general rules and regulations to the specific conditions of the particular case. Ordinarily only the latter are listed below.

PROJECT No. 63—ALASKA.

*License issued* April 19, 1922, for period of 25 years.

*Licensee:* Alaska Endicott Mining & Milling Co., Tacoma, Wash.

*Location of project:* Beardslee Creek at the head of William Henry Bay, Lynn Canal, Alaska.

*Description of project:* A log dam 12 feet high, creating a reservoir of a capacity of 1,500 acre-feet; power house containing 850 horsepower in water wheel; a wood stave and iron pipe conduit approximately 4,400 feet long leading from the dam to the power house; power capacity, 350 horsepower; ultimate installed capacity, 1,000 horsepower.

SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin on date of issuance of license and to be completed June 30, 1923. Supervision of construction and stream gauging by district forester, Forest Service.

*Relating to operation.*—None.

*Annual charges.*—For use of public lands, \$35. For reimbursing costs of administration prior to operation, \$7; first year of operation, \$17.50; second year of operation, \$35; third year and thereafter, \$37.50.

## PROJECT No. 70—MONTANA.

*License issued* August 29, 1921, for a period of 50 years.

*Licensee:* Rock Creek Power Co., Missoula, Mont.

*Location of project:* Rock Creek, Missoula National Forest, Granite County, Mont.

*Description of project:* A rock-fill timber crib diversion dam, 2 feet high and 200 feet long. Conduit of open cut, wood flume, and wood stave pipe sections, combined length 17,100 feet; wooden power house containing two hydroelectric units of 700-kilowatt capacity each; power capacity, 1,060 horsepower; installed capacity, 1,880 horsepower; power to be used in public service.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin July 1, 1922, and be completed August 1, 1924. Amendment granted June 28, 1922, giving extension of time for commencement of construction to July 1, 1924, and for completion of construction to August 1, 1926. Supervision of construction by district forester. Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, U. S. Geological Survey.

*Annual charges.*—For use of Government lands, \$71.30 to \$77.30, depending upon amount of power developed. For reimbursing for costs of administration prior to operation, \$21.20; first year operation, \$53; second year operation, \$106; third year and thereafter, \$265. The figures are approximate and subject to change, as factors upon which they are computed may change.

## PROJECT No. 77—CALIFORNIA.

*License issued* April 15, 1922, for a period of 50 years.

*Licensee:* Snow Mountain Water & Power Co., San Francisco, Calif.

*Location of project:* South Eel River, near Potter Valley, Lake and Mendocino Counties, Calif; partially in the California National Forest.

*Description of project:* A concrete gravity dam, initial height 135 feet, ultimate height 185 feet, located on the South Eel River, known as Scott Dam; reservoir formed to be 73,160 acre-feet initial capacity and 214,810 acre-feet ultimate capacity; power house at toe of Scott Dam containing 3,500 horsepower in hydroelectric equipment; a diversion dam 50 feet high on South Eel River, known as Van Arsdale Dam; reservoir formed to be 800 acre-feet capacity, pressure conduit 9,200 feet long leading from Van Arsdale Dam to power house in Potter Valley on Russian River; Potter Valley power house contains 7,000 Kva. in hydroelectric equipment; discharge canal from power house 6,420 feet long to a branch of Russian River; transmission system one three-phase 55,000-volt line from Scott Dam to Potter Valley power house, thence to Santa Rosa, Fulton, St. Helena, and Oak Knoll; total length 119.6 miles and 6.6 miles of 2,300-volt line; substations at Talmage, Hopland, Asti, St. Helena, and Ukiah. Power capacity 14,400 horsepower, installed capacity 14,670 horsepower; power to be used in public service.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction of part 1—Scott Dam to 1,900-foot spillway level, complete December 31, 1921; part 2—Power house at Scott Dam and installation of additional equipment at Potter Valley power house and completion of transmission system, complete December 31, 1921; part 3—

Raise Scott Dam to 1,950-foot spillway level, begin January 1, 1925, and complete July 1, 1928, unless postponed by the Commission. Supervision of construction by district engineer, Forest Service. If unsatisfactory abutment conditions develop at Scott Dam, licensee to perform such extra work as the Commission may require. Initial development at Scott Dam to be tested for safety of foundations before increase in height will be permitted. Complete plans of power plant at Scott Dam to be submitted before construction begins. If so ordered, licensee to replace 66-inch riveted steel pipe in Potter Valley conduit with a conduit of a capacity equal to that of the main tunnel, and provide sufficient capacity at Potter Valley plant to utilize full capacity of conduit. A marginal strip of 200 feet width to be cleared around reservoir at Scott Dam at 1,905-foot contour level before December 31, 1924, when dam is raised to 1,950-foot level; entire reservoir site shall be cleared to 1,955-foot contour within one year after completion of construction.

*Relating to operation.*—Supervision of stream gauging by district engineer, U. S. Geological Survey.

*Annual charges.*—For use of Government lands \$520 to \$720, depending upon the amount of power developed. For reimbursing cost of administration prior to operation, \$288; first year operation, \$600; maximum charge, \$3,800; transmission line charge, \$3.70.

*Miscellaneous conditions.*—Valuation of Van Arsdale Dam and reservoir and conduit from reservoir to Potter Valley power house, of the Potter Valley power house and equipment and discharge canal from Potter Valley power house, and of transmission lines, except the line from Scott Dam to Potter Valley powerhouse, is to be made as soon as practicable. In the event of transfer of properties covered by license to a municipality, a new license will be issued or amendments made so that license will be appropriate for municipal operation.

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#### PROJECT No. 78—CALIFORNIA.

*License issued* December 29, 1921, for a period of 50 years.

*Licensee:* Western States Gas & Electric Co., Stockton, Calif.

*Location of project:* A constructed and operating power plant on the South Fork of American River in Eldorado County, Calif., containing 8,100 horsepower of hydroelectric equipment; a diversion canal 7.3 miles long, 140 second-foot capacity; a ditch from Slab Creek to Finnon Reservoir, capacity 7.5 second-foot; Medley Lakes Reservoir, capacity 5,094 acre-feet; Twin Lakes Reservoir, capacity 8,000 acre-feet; Echo Lakes Reservoir 1,895 acre-feet; Finnon Reservoir, capacity 600 acre-feet. A 60,000-volt transmission line 165 miles long in a loop circuit including Placerville, Lodi, Stockton, and other towns; power capacity, 6,400 horsepower; power to be used in public service.

#### SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Enlargement of Twin Lakes Reservoir to 8,000 acre-feet capacity, to be completed by December 1, 1922. Field notes of flow-line traverse of Echo Lakes Reservoir to be submitted. Supervision of construction by district forester.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands \$425.60, subject to change depending upon amount of power developed. For reimbursing cost of administration, prior to operation, \$128; first year operation, \$320; second year operation, \$640; third year and thereafter, \$1,600. Transmission line charge, \$24.

*Miscellaneous conditions.*—Valuation of entire project, except enlargement of Twin Lakes Reservoir, to be made. License issued with the understanding that rights of licensee under sections 2339 and 2340, Revised Statutes of the United States, are not affected.

#### APPROVAL OF ASSIGNMENT OF RIGHTS.

Assignment of the Western States Gas & Electric Co.'s rights under license in Medley Lakes Reservoir, Twin Lakes Reservoir, Echo Lake Reservoir, and Echo Lake Conduit to El Dorado Power Co., March 28, 1922.

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#### PROJECT No. 94—ALASKA.

*License issued* October 14, 1921, for a period of 50 years.

*Licensee:* Alaska-American Paper Corporation, Dover, Del.

*Location of project:* Orchard Lake, Shrimp Bay, Revillagigedo Island, Alaska, in Tongass National Forest.

*Description of project:* A timber and rock-fill dam at outlet of Orchard Lake, forming a reservoir of 85,700 acre-feet available capacity; a 7.5-foot wood pipe conduit 2,000 feet long leading to power house containing 5,200 horsepower in hydraulic turbines; power capacity, 4,620 horsepower; power to be used in the manufacture of wood pulp.

#### SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction work to begin by August 31, 1922, and to be completed August 31, 1923. Supervision of construction by district forester, Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, Forest Service.

*Annual charges.*—For use of Government lands, \$462. For reimbursing cost of administration prior to operation, \$92.40; first-year operation, \$231; second year, \$462; third year and thereafter, \$1,155.

*Miscellaneous conditions.*—License granted for the purpose of developing power for the manufacture of pulp and paper. No other use to be made of power without prior approval of the Commission.

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#### PROJECT No. 108—WISCONSIN.

*License issued* August 8, 1921, for a period of 50 years.

*Licensee:* Wisconsin-Minnesota Light & Power Co., La Crosse, Wis.

*Location of project:* Chippewa River, Sawyer County, Wis.

*Description of project:* An earth-fill dam 995 feet long and 45 feet high, providing storage capacity of 275,000 acre-feet. Located partially on public lands and on tribal lands in Lac Court Oreilles Indian Reservation. Power capacity, 10,043 horsepower; water to be used in power plants located downstream from reservoir; power to be used in public service.

#### SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction of dam to begin by October 1, 1921, and to be completed by April 1, 1923. Supervision of construction by district engineer, War Department. During construction plans to be altered and precautions taken to intercept seepage and insure stability of foundations of dam. Taintor gates to be operated both by hand power and mechanical operation

to insure continuity of operation. Merchantable timber to be cut and removed from reservoir site before flooding, and to be paid for at stated rates. If so directed a beach one-half mile long to be cleared to be used as village site for Indians. After beach is cleared, suitable church, school, and store buildings for use of Indian families to be built. Certain portions of reservoir area to be cleared to the satisfaction of the representative of the Commission and of the State Railroad Commission of Wisconsin. New homes to be provided for Indian families living on tribal lands within flowage area.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey. Indians to be given right to hunt, fish, and farm wild rice on reservoir. Gate keeper to be in attendance to operate Taintor gates in case of accident or mechanical inoperation.

*Annual charges.*—For use of Government lands, \$33; for use of tribal Indian lands, \$1,200. For reimbursing cost of administration prior to operation, \$200.86; first-year operation, \$502.15; second-year operation, \$1,004.30; third year and thereafter, \$2,510.75.

*Miscellaneous conditions.*—Remains of deceased Indians interred on tribal lands within reservoir to be taken up and reinterred. Reservoir to be stocked with muskellunge, pike, and bass in accordance with requirements of the Fish Commission of Wisconsin. An area equal to present rice-bearing area of tribal lands overflowed to be seeded to wild rice. One year's crop of rice to be paid for.

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#### PROJECT NO. 120—CALIFORNIA.

*License issued* June 8, 1922, for the period ending March 3, 1971.

*Licensee:* Southern California Edison Co., Los Angeles, Calif.

*Location of project:* San Joaquin, in Fresno and Madera Counties, Calif.

*Description of project:* A concrete overflow dam 100 feet high and 345 feet long having a capacity of 937 acre-feet; an unlined pressure tunnel 21 feet wide and 10.5 feet high, length 28,056 feet; six parallel penstocks 6.5 feet in diameter and 1,213 feet long; a reinforced concrete power house containing six generating units of 33,500 horsepower each, and auxiliary equipment; two parallel transmission lines 1.5 miles long, operating at 220,000 volts, to connect with existing transmission system. Power capacity, 55,000 horsepower; power to be used in public service.

#### SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction of part 1, consisting of a dam, tunnel, two penstocks, transmission line and power house for two generating units, begin July 1, 1922, complete December 31, 1923. Part 2, consisting of four penstocks and four generating units, complete by December 31, 1920. Supervision of construction by district engineer, Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands, \$5,500. For reimbursing cost of administration prior to operation, \$1,100; first year operation, \$2,750; second year operation, \$5,500; third year and thereafter, \$13,750. Transmission line charge, \$49.50.

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#### PROJECT NO. 130—COLORADO.

*License issued* December 12, 1921, for a period of 50 years.

*Licensee:* Grace S. Eyre, Buena Vista, Colo.

*Location of project:* Chalk Creek, near St. Elmo, Chaffee County, Colo., within the Leadville National Forest.

*Description of project:* A concrete dam 8 feet high, a 32-inch steel conduit 6,351 feet long, a power house containing two hydroelectric generating units of 500 horsepower each, a transmission line to Buena Vista, Colo.; power capacity, 560 horsepower; power to be used in public service.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Construction to begin July 1, 1923, complete August 1, 1924. Supervision of construction by district forester, Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands, \$56. For reimbursing cost of administration, prior to operation, \$11.20; first year operation, \$28; second year operation, \$56; third year and thereafter, \$140. Transmission line, \$12.40.

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**PROJECT No. 155—CALIFORNIA.**

*License issued* August 16, 1922, for period of 50 years.

*Licensees:* The Southern Sierras Power Co., Riverside Calif.

*Location of project:* Snow Creek and tributaries, Riverside County, Calif., within the Cleveland National Forest.

*Description of project:* No. 1 development: A concrete dam across Falls Creek, diverting water through a 12-inch wood pipe to East Fork of Snow Creek; a concrete dam across East Fork of Snow Creek below outlet of Falls Creek conduit; an 18-inch wood-pipe conduit from dam across East Fork of Snow Creek to forebay; a concrete dam across Snow Creek in sec. 5, T. 4 S., R. 3 E., S. B. M.; an 18-inch wood-pipe conduit from Snow Creek Dam to forebay; an 18-inch steel penstock from forebay to a reinforced concrete power house, No. 1, located on Snow Creek, having an installed capacity of 2,000 Kva. No. 2 development: A dam across Falls Creek and an extension of the wood-pipe conduit from Falls Creek to East Fork of Snow Creek; a concrete dam across East Fork of Snow Creek and a 30-inch wood-pipe conduit leading from this dam and discharging below power house No. 1; a concrete dam across Snow Creek below power house No. 1 and a conduit leading from this dam to forebay; a 24-inch steel penstock leading from forebay to a concrete power house on Snow Creek, having an installed capacity of 1,500 Kva; an 87,000-volt transmission line connecting the two power houses and extending to the Banning-Coachella transmission line of the company. Power capacity, 851 horsepower; installed capacity, 3,750 horsepower; power to be used in public service.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Construction of part 1, consisting of No. 2 development and transmission line from No. 2 power house to Banning-Coachella transmission line; begin by December 31, 1922, and complete by December 31, 1923. Part 2, consisting of No. 1 development and transmission line connecting the two power houses; begin by December 31, 1923, and complete by December 31, 1924. Supervision of construction by district engineer, Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands, \$56.70. For reimbursing cost of administration prior to operation, \$17.02; first year operation, \$42.55; second year operation, \$85.10; third year and thereafter, \$212.75. Transmission line charge, \$9.75.

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PROJECT No. 166—OHIO.

*License issued* August 24, 1921, for a period of 50 years.

*Licensee:* The McConnellsville-Malta Electric Co., McConnellsville, Ohio.

*Location of project:* Muskingum River, at Dam No. 7, near McConnellsville, Ohio.

*Description of project:* A constructed plant located at Government Dam No. 7, containing two reaction turbines of 250 horsepower each, gear-connected to generators; power capacity 210 horsepower; power to be used in public service.

SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—A headgate to be installed at entrance to headrace.

*Relating to operation.*—Operation of navigation facilities to be controlled by rules and regulations issued by Secretary of War. Electric energy for operation of lock and equipment to be delivered free of charge. Head gate and race to be kept in good repair. In case of neglect to keep headrace in repair, district engineer may repair same and charge cost to licensee. The use of land for manufacturing processes the waste or refuse of which will obstruct navigation, injure water for drinking purposes, or kill fish, prohibited. In case of deficiency of water supply, preference to be given consumers in the order of original establishment. United States retains right to use water in any amount necessary for navigation purposes.

*Annual charges.*—For reimbursing cost of administration prior to operation, \$4.20; first year operation, \$10.50; second year operation, \$21; third year and thereafter, \$52.50. Charge for use of Government dam, \$493.50.

*Miscellaneous conditions.*—Fair value of project to be determined as soon as practicable.

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PROJECT No. 184—CALIFORNIA.

*License issued* February 23, 1922, for a period of 50 years.

*Licensee:* El Dorado Power Co., San Francisco, Calif.

*Location of project:* On South Fork of American River, in Eldorado, Alpine, and Amador Counties, Calif.; partially within the Eldorado National Forest.

*Description of project:* A power plant of 107,500 horsepower ultimate installed capacity, located on South Fork of American River, in sec. 22, T. 11 N., R. 12 E., M. D. M.; a diversion dam on South Fork below its junction with Silver Fork; a 25-mile diversion canal and 1.5 miles of pipe line or open conduit to a forebay in sec. 23, T. 11 N., R. 12 E.; a 6-mile transmission line to connect with existing transmission system of the Western States Gas & Electric Co.; 5 storage reservoirs as follows: Medley Lakes, 9,000 acre-feet capacity (4,000 acre-feet in addition to the capacity licensed in project No. 78); Twin Lakes, 25,000 acre-feet capacity (17,000 acre-feet in addition to capacity licensed in project No. 78); Silver Lake, 25,000 acre-feet capacity; Alder Creek, 25,000 acre-feet capacity; and Plum Creek, 6,000 acre-feet capacity.



## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Field notes and maps of meander survey of all reservoirs to be submitted. Detailed map of transmission line to be submitted. Construction of part 1, consisting of developing Twin Lakes to 16,000 acre-feet capacity, reconstructing El Dorado Ditch to a capacity of 120 cubic feet per second, constructing a forebay and one penstock, installing two generators of 7,500-kilowatt capacity each, and constructing a transmission line; begin August, 1922, complete January, 1923. Part 2—Enlarging El Dorado Ditch to full capacity; install one penstock and one 15,000-kilowatt generating unit; increase storage at Twin Lakes to 25,000 acre-feet; complete January, 1926. Part 3—Complete ditches, flumes and siphons to full capacity; to construct penstock and install one 15,000-kilowatt generating unit; develop 40,000 acre-feet of storage (20,000 at Silver Lake, 4,000 at Medley Lakes, 15,000 at Alder Creek Reservoir), complete January, 1928. Part 4—Complete entire project to full capacity by January, 1929. Supervision of construction by district engineer, Forest Service.

*Relating to operation.*—Supervision over stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands, maximum charge \$1,550; this will vary, depending upon amount of power developed. For reimbursing cost of administration, prior to operation, \$600; first year operation \$1,200 to a maximum of \$7,500 upon completion of project.

*Miscellaneous conditions.*—Valuation of constructed portions on date of license to be made as soon as practicable.

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PROJECT No. 185—CALIFORNIA.

*License issued* November 2, 1921, for a period of 50 years.

*Licensee:* The Southern Sierras Power Co., Riverside, Calif.

*Location of project:* Near Forest Home, San Bernardino County, Calif., partially within the Angeles National Forest.

*Description of project:* Diversion dams across High, Vivian, Falls, Alder, and Lost Creeks; a wood-stave pipe conduit 5.6 miles long, leading from diversion dams to forebay; a 6,064-foot steel penstock leading from forebay to a concrete power house containing 3,000 Kva. in generating equipment; an 87,000-volt transmission line 8.2 miles long from the power house to the San Bernardino-Imperial Valley transmission line of the company; a storage reservoir created by an 80-foot rock-fill dam across Falls Creek; power capacity, 1,400 horsepower; installed capacity, 4,000 horsepower; power to be used in public service.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction of part 1, consisting of entire project, except Falls Creek storage dam and reservoir, to begin by January 1, 1922, and to be completed June 30, 1923. Part 2, consisting of Falls Creek storage dam and reservoir, begin January 1, 1925, complete by December 31, 1925. Supervision of construction by district engineer, Forest Service.

*Relating to operation.*—Supervision of stream gauging by district engineer, United States Geological Survey.

*Annual charges.*—For use of Government lands, \$140. For reimbursing cost of administration, prior to operation, \$28; first year operation, \$70; second year, \$140; third year and thereafter, \$350. Transmission line charge, \$8.15.

## LICENSES FOR MINOR PROJECTS.

Power projects with a power capacity, as computed under the provisions of section 15 of Regulation 1, of less than 100 horsepower, and all transmission lines for which separate license is issued are classed as "minor projects" and deemed to be subject to the waiver of conditions authorized by subsection (i) of section 10 of the Act.

## PROJECT No. 148—OREGON.

*License issued August 24, 1921, for a period of 50 years.*

*Licensee: Charles S. Benefiel, Paisley, Oreg.*

*Location of project: Chewaucan River, near Paisley, Lake County, Oreg.*

*Description of project: A rock and earth dam 14 feet high and 216 feet long; a 5.2-acre reservoir created by the dam; a 50-foot timber flume, 10 feet wide and 7 feet deep, terminating in a penstock 9 feet square; a power house containing 60 horsepower in water turbines; power capacity, 60 horsepower.*

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.—Construction work: Begin September 30, 1921, complete September 30, 1922.*

*Relating to operation.—None.*

*Annual charges.—None.*

## PROJECT No. 306—ALASKA.

*License issued July 17, 1922, for a period of 50 years.*

*Licensee: George Inlet Packing Co., Portland, Oreg.*

*Location of project: On Beaver Falls Creek, Bevilagigade Island, Alaska, partially within the Tongass National Forest.*

*Description of project: A constructed diversion dam across Beaver Falls Creek; flume 160 feet long, 16-inch wooden pipe 300 feet long; three Pelton wheels located in the licensee's cannery on George Inlet; power capacity, 75 horsepower; installed capacity, 90 horsepower; power used in canning industry.*

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.—Constructed project.*

*Relating to operation.—None.*

*Annual charges.—None.*

*Miscellaneous conditions.—Commission reserves right to grant license for further power developments on Beaver Falls Creek. Diversion of water by licensee limited to 10 cubic feet per second. If further development on said stream is made, licensee may be furnished, free of charge, 90 horsepower and one-half cubic foot per second instead of 10 cubic feet per second of water.*

## PROJECT No. 313—ALASKA.

*License issued April 11, 1922, for a period of 25 years.*

*Licensee: J. H. Gunn, Juneau, Alaska.*

*Location of project: Gunn Creek, Lisianski Inlet, Chichagoff Island, Alaska, in the Tongass National Forest.*

*Description of project: Diversion dam across Gunn Creek; a conduit 1,350 feet long, through a 72-inch Pelton-type water wheel installed in Gunn Creek; power capacity, 60 horsepower; power to be used for mining operations.*

*None.*

## PROJECT No. 236—UTAH.

*License issued* March 25, 1922, for a period of 50 years.

*Licensee:* Blue Mountain Irrigation Co., Monticello, Utah.

*Location of project:* Pole Canyon Creek, San Juan County, Utah, in the La Sal National Forest.

*Description of project:* A constructed project consisting of a steel-pipe conduit 4.13 miles long, delivering water to a 30-kilowatt hydroelectric unit installed in a power house in sec. 26, T. 33 S., R. 23 E., S. L. B. and M.; a 72-mile transmission line operating at 2,300 volts; power capacity, 40 horsepower; installed capacity, 40 horsepower.

No special terms prescribed.

## PROJECT No. 241—ALASKA.

*License issued* March 20, 1922, for a period of 25 years.

*Licensee:* Freshwater Bay Lumber Co. (Inc.), Douglas, Alaska.

*Location of project:* Pavlof Harbor, Freshwater Bay, Alaska, in the Tongass National Forest.

*Description of project:* A 6-foot timber dam across a small stream tributary to Pavlof Harbor, a flume 86 feet long, a penstock 18 feet high, and water turbines installed in a small power house on Pavlof Harbor; power capacity, 100 horsepower; installed capacity, 100 horsepower; power to be used in lumber mill.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by May 31, 1922, complete by May 31, 1923. Fishways to be installed over the dam.

## PROJECT No. 253—COLORADO.

*License issued* November 2, 1921, for a period of 25 years.

*Licensee:* Henry Weber, Buena Vista, Colo.

*Location of project:* Denny Creek, Chaffee County, Colo., on lands in the Leadville National Forest.

*Description of project:* A diversion dam across Denny Creek; a 977-foot pipe from diversion dam to power house located on Denny Creek, containing one 110-Kva. hydroelectric unit; a 1,650-foot transmission line to Gladstone mine of the licensee. Power capacity and installed capacity, 100 horsepower each; power to be used for mining operations.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by December 1, 1921, and complete by July 31, 1922.

## LICENSES FOR TRANSMISSION LINES.

Transmission lines are considered "minor projects" and deemed to be subject to the waiver of conditions authorized by subsection (i) of Section 10 of act.

## PROJECT No. 144—IDAHO.

*License issued* November 12, 1921, for a period of 50 years.

*Licensee:* Idaho Power Co., Boise, Idaho.

## LICENSES FOR MINOR PROJECTS.

Power projects with a power capacity, as computed under the provisions of section 15 of Regulation 1, of less than 100 horsepower, and all transmission lines for which separate license is issued are classed as "minor projects" and deemed to be subject to the waiver of conditions authorized by subsection (i) of section 10 of the Act.

## PROJECT No. 148—OREGON.

*License issued* August 24, 1921, for a period of 50 years.

*Licensee:* Charles S. Benefiel, Paisley, Oreg.

*Location of project:* Chewaucan River, near Paisley, Lake County, Oreg.

*Description of project:* A rock and earth dam 14 feet high and 216 feet long; a 5.2-acre reservoir created by the dam; a 50-foot timber flume, 10 feet wide and 7 feet deep, terminating in a penstock 9 feet square; a power house containing 60 horsepower in water turbines; power capacity, 60 horsepower.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction work: Begin September 30, 1921, complete September 30, 1922.

*Relating to operation.*—None.

*Annual charges.*—None.

## PROJECT No. 206—ALASKA.

*License issued* July 17, 1922, for a period of 50 years.

*Licensee:* George Inlet Packing Co., Portland, Oreg.

*Location of project:* On Beaver Falls Creek, Revillagigedo Island, Alaska, partially within the Tongass National Forest.

*Description of project:* A constructed diversion dam across Beaver Falls Creek; flume 160 feet long, 10-inch wooden pipe 860 feet long; three Pelton wheels located in the licensee's cannery on George Inlet; power capacity, 75 horsepower; installed capacity, 90 horsepower; power used in canning industry.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Constructed project.

*Relating to operation.*—None.

*Annual charges.*—None.

*Miscellaneous conditions.*—Commission reserves right to grant license for further power developments on Beaver Falls Creek. Diversion of water by licensee limited to 10 cubic feet per second. If further development on said stream is made, licensee may be furnished, free of charge, 90 horsepower and one-half cubic foot per second instead of 10 cubic feet per second of water.

## PROJECT No. 213—ALASKA.

*License issued* April 11, 1922, for a period of 25 years.

*Licensee:* J. H. Cann, Juneau, Alaska.

*Location of project:* Cann Creek, Lisianski Inlet, Chichagoff Island, Alaska, in the Tongass National Forest.

*Description of project:* Diversion dam across Cann Creek; a conduit 1,350 feet long for delivering water through a 72-inch Pelton-type water wheel installed in a power house on Cann Creek; power capacity, 60 horsepower; installed capacity, 75 horsepower; power to be used for mining operations.

No special terms prescribed.

## PROJECT No. 236—UTAH.

*License issued* March 25, 1922, for a period of 50 years.

*Licensee:* Blue Mountain Irrigation Co., Monticello, Utah.

*Location of project:* Pole Canyon Creek, San Juan County, Utah, in the La Sal National Forest.

*Description of project:* A constructed project consisting of a steel-pipe conduit 4.13 miles long, delivering water to a 30-kilowatt hydroelectric unit installed in a power house in sec. 26, T. 33 S., R. 23 E., S. L. B. and M.; a 72-mile transmission line operating at 2,300 volts; power capacity, 40 horsepower; installed capacity, 40 horsepower.

No special terms prescribed.

## PROJECT No. 241—ALASKA.

*License issued* March 20, 1922, for a period of 25 years.

*Licensee:* Freshwater Bay Lumber Co. (Inc.), Douglas, Alaska.

*Location of project:* Pavlof Harbor, Freshwater Bay, Alaska, in the Tongass National Forest.

*Description of project:* A 6-foot timber dam across a small stream tributary to Pavlof Harbor, a flume 86 feet long, a penstock 18 feet high, and water turbines installed in a small power house on Pavlof Harbor; power capacity, 100 horsepower; installed capacity, 100 horsepower; power to be used in lumber mill.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by May 31, 1922, complete by May 31, 1923. Fishways to be installed over the dam.

## PROJECT No. 253—COLORADO.

*License issued* November 2, 1921, for a period of 25 years.

*Licensee:* Henry Weber, Buena Vista, Colo.

*Location of project:* Denny Creek, Chaffee County, Colo., on lands in the Leadville National Forest.

*Description of project:* A diversion dam across Denny Creek; a 977-foot pipe from diversion dam to power house located on Denny Creek, containing one 110-Kva. hydroelectric unit; a 1,650-foot transmission line to Gladstone mine of the licensee. Power capacity and installed capacity, 100 horsepower each; power to be used for mining operations.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by December 1, 1921, and complete by July 31, 1922.

## LICENSES FOR TRANSMISSION LINES.

Transmission lines are considered "minor projects" and deemed to be subject to the waiver of conditions authorized by subsection (i) of Section 10 of the Act.

## PROJECT No. 144—IDAHO.

*License issued* November 12, 1921, for a period of 50 years.

*Licensee:* Idaho Power Co., Boise, Idaho.

*Location of project:* A constructed transmission line from Pocatello to Blackfoot, Idaho, on Fort Hall Indian Reservation.

*Description of project:* Transmission line operating at 44,000 volts; a 40-foot right of way; length of line on public lands, 7.2 miles.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Conditions set forth in standard form. Meters to be installed for measuring amount of interchange of power.

*Annual charges.*—For use of tribal lands, \$38.

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**PROJECT No. 150—ARIZONA.**

*License issued* May 1, 1922, for a period of 50 years.

*Licensee:* Central Arizona Light & Power Co., Phoenix, Ariz.

*Location of project:* A constructed transmission line from connection with the Arizona Power Co.'s line in sec. 5, T. 11 N., R. 4 E., and substation of licensee in Phoenix, Ariz., partially within the Prescott National Forest and vacant public lands.

*Description of project:* A 40,000-volt, 3-phase, single-circuit transmission line, constructed on A-frames; width of right of way, 40 feet; length on Government lands, 46.2 miles. Power transmitted to be used in public service.

**SPECIAL TERMS PRESCRIBED.**

*Annual charges.*—Transmission line charge, \$231.

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**PROJECT No. 180—CALIFORNIA.**

*License issued* January 6, 1922, for a period of 50 years.

*Licensee:* Pacific Gas & Electric Co., San Francisco, Calif.

*Location of project:* Connecting Colgate power house of the licensee with a substation in the city of Grass Valley, Calif.; partially on public lands.

*Description of project.*—A 3-phase, 60,000-volt transmission line; 100 feet right of way; length of line on public lands, 1.32 miles.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Construction to begin by December 31, 1921; complete by June 1, 1922. Supervision of construction by district forester, Forest Service.

*Annual charges.*—\$6.60.

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**PROJECT No. 181—CALIFORNIA.**

*License issued* January 6, 1922, for a period of 50 years.

*Licensee:* Pacific Gas & Electric Co., San Francisco, Calif.

*Location of project:* Between licensee's Deer Creek power house and Drum power house in Nevada and Placer Counties, Calif., partially within the Tahoe National Forest.

*Description of project:* A 3-phase, 60,000-volt transmission line; right of way, 100 feet; length on public lands, 1.32 miles.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Construction work to begin by December 31, 1921, and to be completed by June 1, 1922. Supervision of construction by district forester, Forest Service.

*Annual charges.*—\$6.60.

## PROJECT No. 198—MONTANA.

*License issued* September 15, 1921, for a period of 25 years.

*Licensee:* Boston & Montana Milling & Power Co., Butte, Mont.

*Location of project:* Between power house of Montana Power Co., on Big Hole River, and the mills and reduction works of licensee, in sec. 14, T. 4 S., R. 12 E., M. P. M., partially on Beaverhead National Forest.

*Description of project:* A 60,000-volt, wood-pole transmission line; width of right of way, 100 feet; length of line on public lands, 23.2 miles; power used for mining operations.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction work to begin by January 1, 1922, and to be completed by December 31, 1922. Supervision of construction by district forester, Forest Service.

*Annual charges.*—\$116.

## PROJECT No. 245—CALIFORNIA.

*License issued* March 9, 1922, for a period of 25 years.

*Licensee:* Darwin Silver Co., Wilmington, Del.

*Location of project:* A transmission line from Division Creek and Cottonwood Creek power plants of the City of Los Angeles to mining properties of licensee, in sec. 14, T. 19 S., R. 40 E., M. D. M., located on public lands.

*Description of project:* A 17.35-mile transmission line operating at 33,000 volts, together with substation on licensee's mine; width of right of way, 100 feet; length of line on Government land 17.32 miles.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by January 1, 1923, and complete by June 30, 1923. Supervision of construction by district engineer, United States Geological Survey.

*Annual charges.*—\$86.60.

## PROJECT No. 255—CALIFORNIA.

*License issued* November 19, 1921, for a period of 50 years.

*Licensee:* The Southern Sierras Power Co., Riverside, Calif.

*Location of project:* From a connection with the existing transmission line of the company in sec. 10, T. 4 N., R. 3 W., to Gold Mountain mine in sec. 36, T. 3 N., R. 1 E., S. B. B. and M., San Bernardino County, Calif, in the Angeles National Forest.

*Description of project:* A 3-phase transmission line operating at 33,000 volts; width of right of way, 100 feet; length of line on Government land, 11.55 miles.

## SPECIAL TERMS PRESCRIBED.

*Relating to construction.*—Construction to begin by January 1, 1922, and complete by December 31, 1922. Supervision of construction by district forester, Forest Service.

*Annual charges.*—\$57.75.

## PROJECT No. 295—NORTH CAROLINA.

*License issued* June 26, 1922, for a period of 50 years.

*Licensee:* Black Mountain Telephone Corporation, Black Mountain, N. C.

*Location of project:* Transmission line from power plant of D. W. Adams, at Catawba Falls, to the towns of Ridgecrest and Black Mountain, McDowell County, N. C., in the Boone National Forest.

*Description of project:* A transmission line 3,286 feet long; length of line on Government lands, 3,285 feet; width of right of way, 100 feet.

**SPECIAL TERMS PRESCRIBED.**

*Relating to construction.*—Construction to begin by October 1, 1922, and complete by December 31, 1922. Supervision of construction by district forester, Forest Service.

*Annual charges.*—\$3.10.

*Proceeds to December 31, 1921, derived from licenses issued by authority of the Federal Water Power Act.*

[Collected in the fiscal year ended June 30, 1922.]

Licenses.	Project No.	Date of license.	Analysis of receipt.	Amount.	Credited on the books of the Treasury to Miscellaneous Receipt titles, as follows:		
					Proceeds of licenses under Federal Water Power Act from Indian reservations.	Proceeds of licenses under Federal Water Power Act from public lands and national forests.	Proceeds of licenses under Federal Water Power Act: Improvements of navigable waters.
Southern California Edison Co.	67	1921. Mar. 3	Administrative charge based on power capacity of 158,000 horsepower at 2 cents per horsepower per year for 304 days.	\$2,631.88	.....	.....	\$2,631.88
			Charge for 1.53 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 304 days; right of way 400 feet in width.	25.49	.....	\$25.49	.....
Do.....	174	...do....	Charge for 9.4 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 304 days.	39.15	.....	39.15	.....
Niagara Falls Power Co.	16	Mar. 2	Administrative charge based on power capacity of 341,425 horsepower, at 2 cents per horsepower per year, for 305 days.	5,706.00	.....	.....	5,706.00
Grace S. Eyre.....	130	Dec. 12	Administrative charge based on power capacity of 560 horsepower, at 2 cents per horsepower per year, for 20 days.	.61	.....	.....	61
			Charge for 2.58 miles transmission line on public lands, State of Colorado, at \$5 per mile (100-foot right of way) per year, for 20 days.	.71	.....	.71	.....
Henry Ford & Son (Inc.).	13	Mar. 3	Administrative charge based on power capacity of 3,640 horsepower, at 2 cents per horsepower per year, for 304 days.	60.63	.....	.....	60.63



*Proceeds to December 31, 1921, derived from licenses issued, etc.—Continued.*

Licenses.	Project No.	Date of license.	Analysis of receipt.	Amount.	Credited on the books of the Treasury to Miscellaneous Receipt titles, as follows:		
					Pro-ceeds of licenses under Federal Water Power Act from Indian reser-vations.	Pro-ceeds of licenses under Federal Water Power Act from public lands and na-tional forests.	Pro-ceeds of licenses under Federal Water Power Act: Im-prove-ments of nav-igable waters.
John R. Love and G. A. von Brecht.	126	1921. July 19	Administrative charge based on power capacity of 400 horsepower, at 2 cents per horsepower per year, for 166 days. Charge for 9.74 miles transmission line on public lands, State of Idaho, at \$5 per mile (100-foot right of way) per year, for 166 days.	\$3.64  22.15	..... .....	..... \$22.15	\$3.64 .....
Idaho Power Co.....	144	Nov. 12	Charge for occupancy of 7.2 miles of transmission line on tribal Indian lands, Fort Hall Indian Reservation, Idaho, right of way 40 feet, at \$5 per mile per year, for 49 days.	4.83	\$4.83	.....	.....
Amazon Dixie Mining Co.	80	Mar. 3	Charge for 4.96 miles transmission line on public lands, State of Montana, at \$5 per mile (100-foot right of way) per year, for 304 days.	20.68	.....	20.68	.....
Coast Valleys Gas & Electric Co.	87	...do....	Charge for 7.35 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 304 days.	30.65	.....	30.65	.....
Alabama Power Co..	82	June 27	Administrative charge based on power capacity of 21,760 horsepower, at 2 cents per horsepower per year, for 188 days. Charge for $\frac{1}{2}$ mile transmission line on public lands, State of Alabama, at \$5 per mile (100-foot right of way) per year, for 188 days.	224.16  1.29	..... .....	..... 1.29	224.16 .....
Rock Creek Power Co.	70	Aug. 29	Administrative charge based on power capacity of 1,060 horsepower, at 2 cents per horsepower per year, for 125 days.	7.26	.....	.....	7.26
Southern Sierras Power Co.	185	Nov. 2	Administrative charge based on power capacity of 1,400 horsepower, at 2 cents per horsepower per year, for 60 days. Charge for 1.63 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 60 days.	4.60  1.34	..... .....	..... 1.34	4.60 .....
Do.....	255	Nov. 19	Charge for 11.55 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 43 days.	6.80	.....	6.80	.....

*Proceeds to December 31, 1921, derived from licenses issued, etc.—Continued.*

Licensee.	Project No.	Date of license.	Analysis of receipt.	Amount.	Credited on the books of the Treasury to Miscellaneous Receipt titles, as follows:		
					Proceeds of licenses under Federal Water Power Act from Indian reservations.	Proceeds of licenses under Federal Water Power Act from public lands and national forests.	Proceeds of licenses under Federal Water Power Act: Improvements of navigable waters.
Butte Jardine Metals Mines Co.	107	1921 Mar. 3	Charge for 1.57 miles transmission line on public lands, State of Montana, at \$5 per mile (100-foot right of way) per year, for 304 days.	\$6.54	.....	\$6.54	.....
Wisconsin-Minnesota Light & Power Co.	108	Aug. 8	Administrative charge based on power capacity of 10,043 horsepower at 2 cents per horsepower per year for 146 days.	80.34	.....		\$80.34
McConnellsville-Malta Electric Co.	166	Aug. 24	Administrative charge based on power capacity of 210 horsepower, at 2 cents per horsepower per year for 130 days.	1.49	.....		1.49
Thomas P. Michell..	203	July 19	Charge for 1.36 miles transmission line on public lands, State of Colorado, at \$5 per mile (100-foot right of way) per year, for 166 days.	3.09	.....	3.09	.....
Consolidated Spanish Belt Silver Mining Co.	121	Mar. 3	Charge for 4.3 miles transmission line on public lands, State of Nevada, at \$5 per mile (100-foot right of way) per year, for 304 days.	17.91	.....	17.91	.....
C. B. Johnson.....	192	July 19	Charge for 1.1 miles transmission line on public lands, State of California, at \$5 per mile (100-foot right of way) per year, for 166 days.	2.50	.....	2.50	.....
Boston & Montana Milling & Power Co.	198	Sept. 15	Charge for 23.2 miles transmission line on public lands, State of Montana, at \$5 per mile (100-foot right of way) per year, for 108 days.	34.32	.....	34.32	.....
Paving Granite Quarry Co.	83	Mar. 3	Charge for 1 mile transmission line on public lands, State of South Dakota, at \$5 per mile (100-foot right of way) per year, for 304 days.	4.17	.....	4.17	.....
Alaskan-American Paper Corporation.	94	Oct. 14	Administrative charge based on power capacity of 4,620 horsepower at 2 cents per horsepower per year, for 79 days.	19.99	.....		19.99
Western States Gas & Electric Co.	78	Dec. 29	Administrative charge based on power capacity of 6,400 horsepower at 2 cents per horsepower per year, for 3 days.	1.05	.....		1.05
			Charge for 4.8 miles transmission line on public lands, State of California, at \$5 per mile (150-foot right of way) per year, for 3 days.	.30	.....	.30	.....
Total.....				8,963.57	4.83	217.09	8,741.65

*Final distribution and credit on the books of the Treasury Department.*

To the general fund of the Treasury.....	\$4,397.96
To the indefinite appropriation (under administration of the War Department):	
Maintenance and operation of dams and other improvements of navigable waters..	4,370.83
To the reclamation fund, special fund.....	108.55
To payments to States under Federal Water Power Act, special funds.....	81.40
To Alabama.....	\$0.48
To California.....	39.82
To Colorado.....	1.43
To Idaho.....	8.30
To Montana.....	23.08
To Nevada.....	6.72
To South Dakota.....	1.57
To Indian fund: Proceeds of labor, Fort Hall Indians.....	4.83
	<hr/> \$8,963.87



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